

Energy Tidbits

Blinken's Non-Denial Denial Won't Squash Expectations That a US/Iran Nuclear "Understanding" is Getting Close

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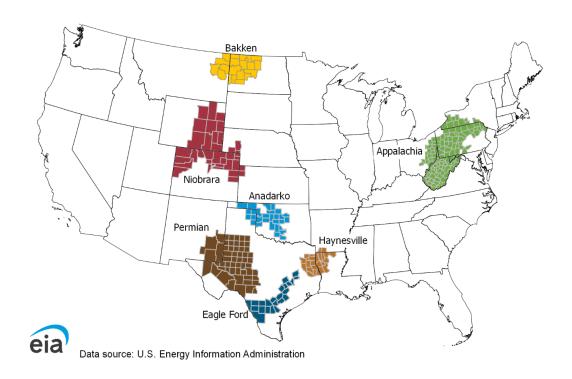
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U.S. Energy Information Administration

June 2023

Drilling Productivity Report

For key tight oil and shale gas regions

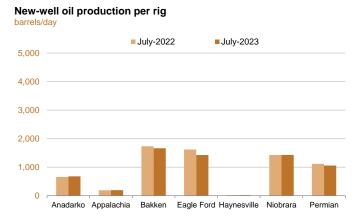


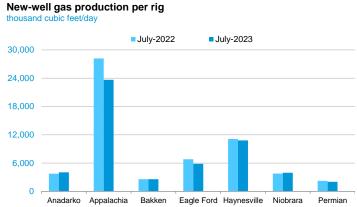
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Drilling Productivity Report

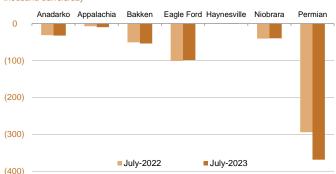
drilling data through May projected production through July





Legacy oil production change

thousand barrels/day



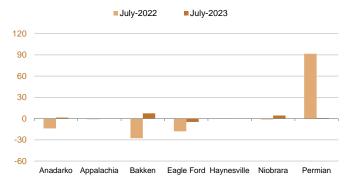
Legacy gas production change

llion cubic feet/day



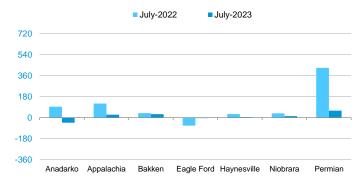
Indicated monthly change in oil production (Jul vs. Jun)

thousand barrels/day



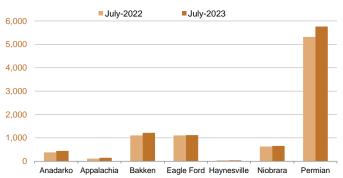
Indicated monthly change in gas production (Jul vs. Jun)

million cubic feet/day



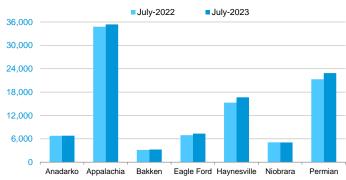
Oil production

thousand barrels/day



Natural gas production

million cubic feet/day



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Anadarko Region

Drilling Productivity Report

June 2023

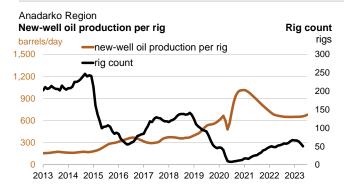
drilling data through May projected production through July

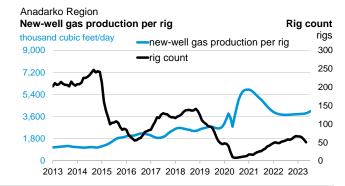


679 July 666 June Monthly additions from one average rig

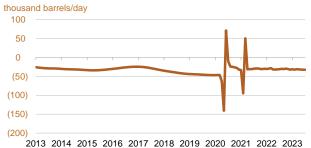
July 4,031
June 3,933
thousand cubic feet/day



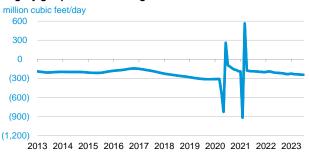




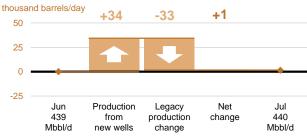
Anadarko Region Legacy oil production change



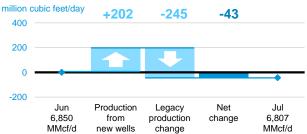
Anadarko Region Legacy gas production change

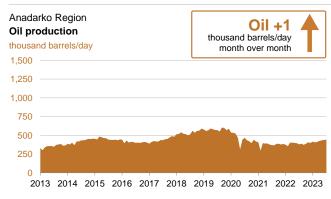


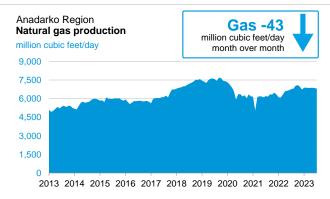
Anadarko Region Indicated change in oil production (Jul vs. Jun)



Anadarko Region Indicated change in natural gas production (Jul vs. Jun)







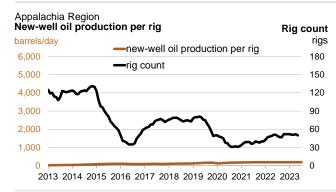
drilling data through May projected production through July

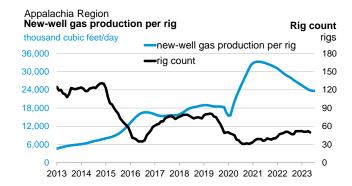


193 July 193 June Monthly additions from one average rig

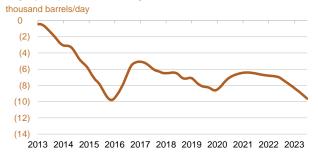
July 23,656
June 23,704
thousand cubic feet/day



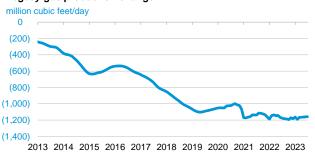




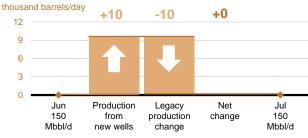
Appalachia Region Legacy oil production change



Appalachia Region Legacy gas production change

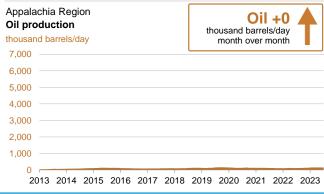


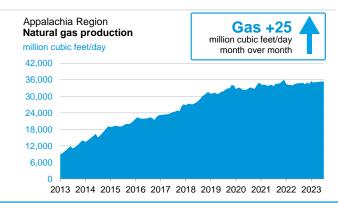
Appalachia Region Indicated change in oil production (Jul vs. Jun)



Appalachia Region Indicated change in natural gas production (Jul vs. Jun)







drilling data through May projected production through July

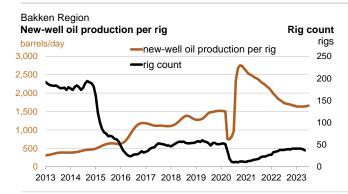


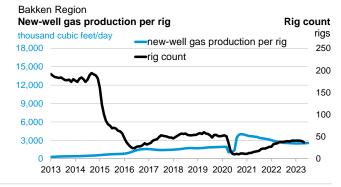
1,662 July 1,650 June

Monthly additions from one average rig

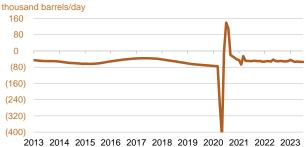
July 2,572
June 2,545
thousand cubic feet/day



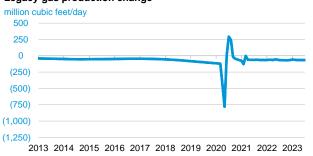




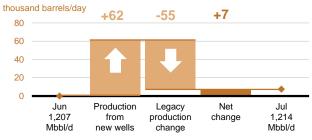
Bakken Region Legacy oil production change



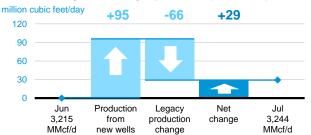
Bakken Region Legacy gas production change

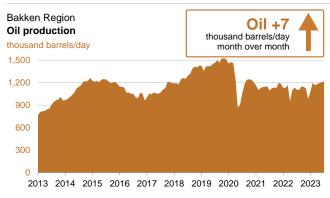


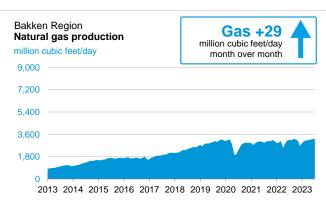
Bakken Region Indicated change in oil production (Jul vs. Jun)



Bakken Region Indicated change in natural gas production (Jul vs. Jun)







5

drilling data through May projected production through July

Drilling Productivity Report

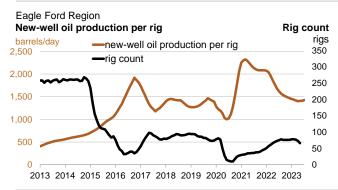


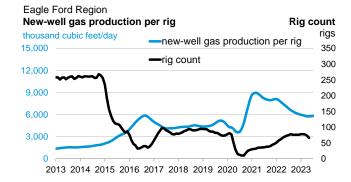
1,425 July 1,411 June

Monthly additions from one average rig

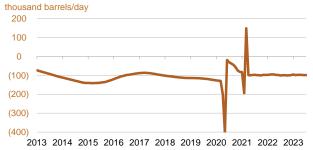
July 5,834
June 5,777
thousand cubic feet/day



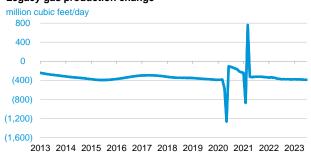




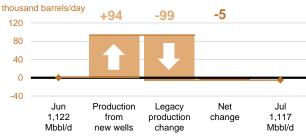
Eagle Ford Region Legacy oil production change



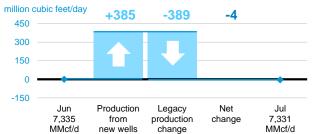
Eagle Ford Region Legacy gas production change

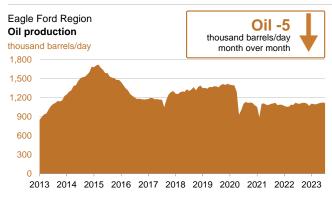


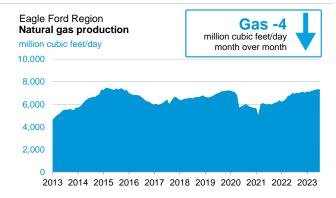
Eagle Ford Region Indicated change in oil production (Jul vs. Jun)



Eagle Ford Region Indicated change in natural gas production (Jul vs. Jun)







Haynesville Region

Drilling Productivity Report

June 2023

drilling data through May projected production through July

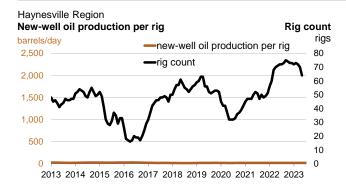


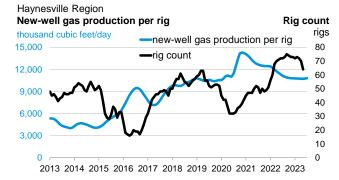
19 July19 Junebarrels/day

Monthly additions from one average rig

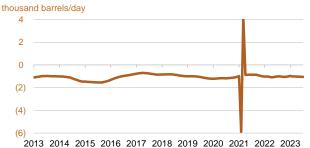
July 10,809
June 10,755
thousand cubic feet/day



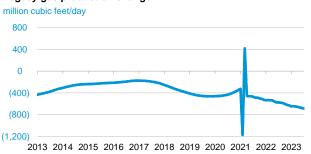




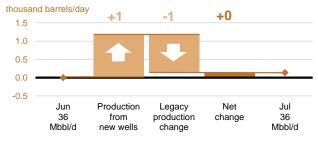
Haynesville Region Legacy oil production change



Haynesville Region Legacy gas production change

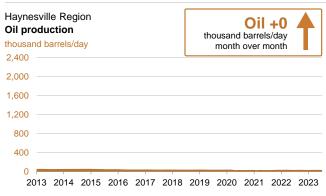


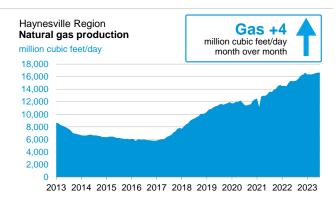
Haynesville Region Indicated change in oil production (Jul vs. Jun)



Haynesville Region Indicated change in natural gas production (Jul vs. Jun)







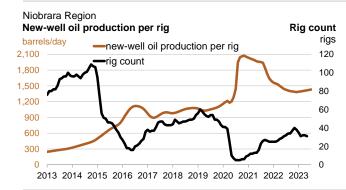
drilling data through May projected production through July

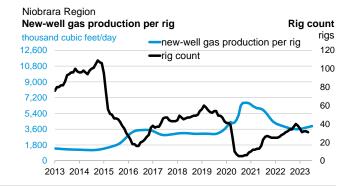


1,430 July 1,423 June Monthly additions from one average rig

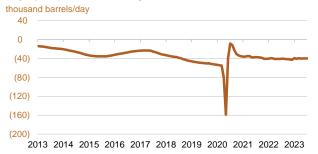
July 3,955
June 3,896
thousand cubic feet/day



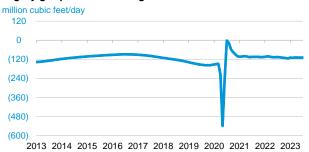




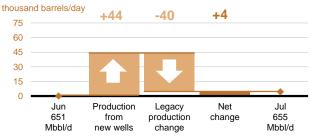
Niobrara Region Legacy oil production change



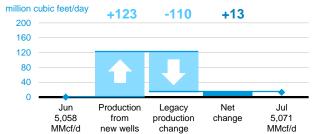
Niobrara Region Legacy gas production change

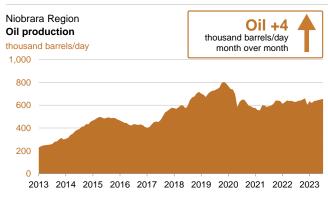


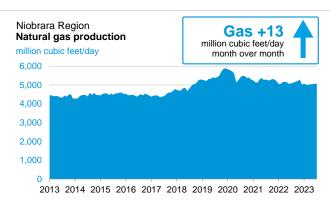
Niobrara Region Indicated change in oil production (Jul vs. Jun)



Niobrara Region Indicated change in natural gas production (Jul vs. Jun)







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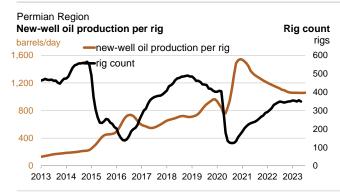
drilling data through May projected production through July

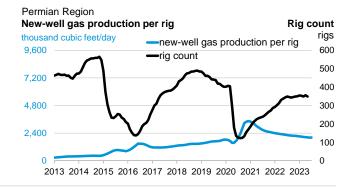


1,058 July 1,055 June Monthly additions from one average rig

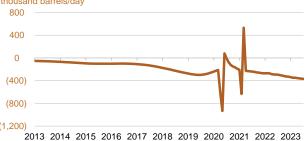
July 2,017
June 2,011
thousand cubic feet/day



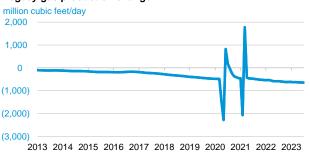




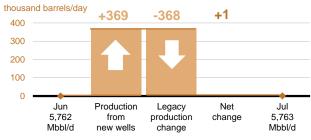
Permian Region Legacy oil production change thousand barrels/day



Permian Region Legacy gas production change

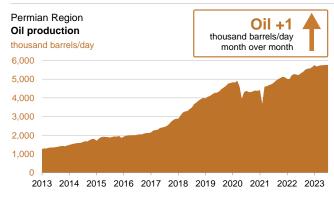


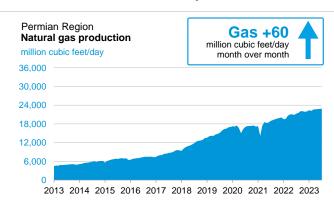
Permian Region Indicated change in oil production (Jul vs. Jun)



Permian Region Indicated change in natural gas production (Jul vs. Jun)







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Explanatory notes

June 2023

Drilling Productivity Report

The Drilling Productivity Report uses recent data on the total number of drilling rigs in operation along with estimates of drilling productivity and estimated changes in production from existing oil and natural gas wells to provide estimated changes in oil¹ and natural gas² production for seven key regions. EIA's approach does not distinguish between oil-directed rigs and gas-directed rigs because once a well is completed it may produce both oil and gas; more than half of the wells do that.

Monthly additions from one average rig

Monthly additions from one average rig represent EIA's estimate of an average rig's³ contribution to production of oil and natural gas from new wells.⁴ The estimation of new-well production per rig uses several months of recent historical data on total production from new wells for each field divided by the region's monthly rig count, lagged by two months.⁵ Current- and next-month values are listed on the top header. The month-over-month change is listed alongside, with +/- signs and color-coded arrows to highlight the growth or decline in oil (brown) or natural gas (blue).

New-well oil/gas production per rig

Charts present historical estimated monthly additions from one average rig coupled with the number of total drilling rigs as reported by Baker Hughes.

Legacy oil and natural gas production change

Charts present EIA's estimates of total oil and gas production changes from all the wells other than the new wells. The trend is dominated by the well depletion rates, but other circumstances can influence the direction of the change. For example, well freeze-offs or hurricanes can cause production to significantly decline in any given month, resulting in a production increase the next month when production simply returns to normal levels.

Projected change in monthly oil/gas production

Charts present the combined effects of new-well production and changes to legacy production. Total new-well production is offset by the anticipated change in legacy production to derive the net change in production. The estimated change in production does not reflect external circumstances that can affect the actual rates, such as infrastructure constraints, bad weather, or shut-ins based on environmental or economic issues.

Oil/gas production

Charts present all oil and natural gas production from both new and legacy wells since 2007. This production is based on all wells reported to the state oil and gas agencies. Where state data are not immediately available, EIA estimates the production based on estimated changes in new-well oil/gas production and the corresponding legacy change.

Footnotes:

- 1. Oil production represents both crude and condensate production from all formations in the region. Production is not limited to tight formations. The regions are defined by all selected counties, which include areas outside of tight oil formations.
- 2. Gas production represents gross (before processing) gas production from all formations in the region. Production is not limited to shale formations. The regions are defined by all selected counties, which include areas outside of shale formations.
- The monthly average rig count used in this report is calculated from weekly data on total oil and gas rigs reported by Baker Hughes.
- A new well is defined as one that began producing for the first time in the previous month. Each well belongs to
 the new-well category for only one month. Reworked and recompleted wells are excluded from the calculation.
 Rig count data lag production data because EIA has observed that the best predictor of the number of new
 wells beginning production in a given month is the count of rigs in operation two months earlier.



Sources June 2023

Drilling Productivity Report

The data used in the preparation of this report come from the following sources. EIA is solely responsible for the analysis, calculations, and conclusions.

Drilling Info (http://www.drillinginfo.com) Source of production, permit, and spud data for counties associated with this report. Source of real-time rig location to estimate new wells spudded and completed throughout the United States.

Baker Hughes (http://www.bakerhughes.com) Source of rig and well counts by county, state, and basin.

North Dakota Oil and Gas Division (https://www.dmr.nd.gov/oilgas) Source of well production, permit, and completion data in the counties associated with this report in North Dakota

Railroad Commission of Texas (http://www.rrc.state.tx.us) Source of well production, permit, and completion data in the counties associated with this report in Texas

Pennsylvania Department of Environmental Protection

(https://www.paoilandgasreporting.state.pa.us/publicreports/Modules/Welcome/Welcome.aspx) Source of well production, permit, and completion data in the counties associated with this report in Pennsylvania

West Virginia Department of Environmental Protection (http://www.dep.wv.gov/oil-and-gas/Pages/default.aspx) Source of well production, permit, and completion data in the counties associated with this report in West Virginia

Colorado Oil and Gas Conservation Commission (http://cogcc.state.co.us) Source of well production, permit, and completion data in the counties associated with this report in Colorado

Wyoming Oil and Conservation Commission (http://wogcc.state.wy.us) Source of well production, permit, and completion data in the counties associated with this report in Wyoming

Louisiana Department of Natural Resources (http://dnr.louisiana.gov) Source of well production, permit, and completion data in the counties associated with this report in Louisiana

Ohio Department of Natural Resources (http://oilandgas.ohiodnr.gov) Source of well production, permit, and completion data in the counties associated with this report in Ohio

Oklahoma Corporation Commission (http://www.occeweb.com/og/oghome.htm) Source of well production, permit, and completion data in the counties associated with this report in Oklahoma



North Dakota Department of Mineral Resources June Director's Cut and April 2023 Production Numbers

Oil Production Numbers

 March
 34,852,951 barrels
 = 1,124,289 barrels/day (final)
 RF +12%

 New Mexico
 53,997,031 barrels
 = 1,741,840 20,703 barrels/day +1%

 April
 34,003,054 barrels
 = 1,133,435 barrels/day +1%
 RF +13%

1,519,037 all-time high Nov 2019

1,092,552 barrels/day = 96% from Bakken and Three Forks

40,883 barrels/day = 4% from Legacy Pools

Revised Revenue 1,000,000 barrels/day

Forecast

Crude Price (\$barrel)	ND Light Sweet	WTI	ND Market
March	69.80	73.37	69.93 RF-7%
April	75.23	79.44	75.16
Today	64.00	67.12	65.56 RF-13%
All-time high (6/2008)	125.62	134.02	126.75
Revised Revenue Forecast			75.00

Gas Production and Capture

March - Final 94,646,560 MCF = 3,053,115 MCF/Day 95% Capture 90,011,299 MCF = 2,903,590 MCF/Day

April 93,513,871 MCF = 3,117,129 MCF/Day +2%

95% Capture 89,211,416 MCF = 3,186,122 MCF/Day

3,179,517 all-time high 9/2022

3,186,122 NEW all-time high 4/2023

Wells Permitted	Drilling
March	89

April 89

May 63 All-time high 370 in 10/2012

Rig Count

March	46
April	45
May	43
Today	38

Federal Surface 0
New Mexico 107

Waiting on Completions

March 483 April 458

Inactive

March 1,900 April 1,899

Completed

March 62 (Preliminary)
April 51 (Preliminary)

May 138 (Preliminary) RF+130%

Revised Rev Forecast 30-40-50-<u>60</u>

Producing

March 17,656

April 17,740 (Preliminary) All-time high 17,791 in 10/2022

15,485 wells 87% are now unconventional

Bakken/Three Forks Wells

All-time high 218 in 5/29/2012

2,255 wells 13% produced from legacy

conventional pools

IIJA Initial Grant Wells PA Sites Reclaimed

January 1 0 February 4 0

March	1	0
April	8	0
May	15	0

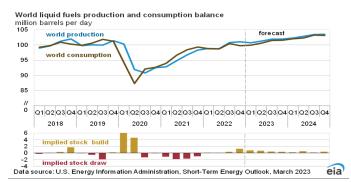
Weekly updates are available at <u>Initial Grant Information - Plugging and Reclamation |</u>
<u>Department of Mineral Resources, North Dakota</u>

Fort Berthold Reservation Activity

	Total	Fee Land	Trust Land
Oil Production (barrels/day)	138,545	48,198	90,347
Drilling Rigs	7	2	5
Active Wells	2,647	648	1,999
Waiting on Completion	27		
Approved Drilling Permits	203	19	184
Potential Future Wells	3,905	1,116	2,789

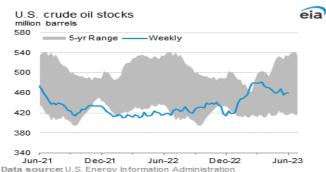
Comments:

The drilling rig count has fallen to 38 due to road restrictions, mergers, and acquisitions but is expected to return to the mid-forties with a gradual increase expected over the next 2 years.



There are 20 frac crews currently active.

Saudi Arabia announced unilateral oil production cuts earlier this month amounting to 1 million barrels per day making the OPEC+ total cut 4.7 million bpd until the end of the year. Russia sanctions, China economic activity, looming recessions, and shifting crude oil supply chains continue to create significant price volatility.



Crude oil transportation capacity including rail deliveries to coastal refineries is adequate, but could be disrupted due to:

US Appeals Court for the ninth circuit upholding of a lower court ruling protecting the Swinomish Indian Tribal Community's right to sue to enforce an agreement that restricts the number of trains that can cross its reservation in northwest Washington state.

DAPL Civil Action No. 16-1534 continues, but the courts have

now ruled that DAPL can continue normal operations until the USACOE EIS is completed.

Drilling activity is expected to slowly increase with operators expected to maintain a permit inventory of approximately 12 months.

There are 0 active, 1 recording, 0 NDIC reclamation projects, 0 remediating, 0 permitted, and 4 suspended surveys.

US natural gas storage is 16% above the five-year average. Both US and world crude oil inventories are average while the US strategic petroleum reserve remains at the lowest level since 1983.

The price of natural gas delivered to Northern Border at Watford City has decreased to \$1.51/MCF today, it is at the lowest level since 3rd quarter 2020 during the pandemic. There is currently enormous oversupply in the Midwest US and LNG prices in Europe have decreased to 2021 levels. Current oil to gas price ratio is 43:1. The state-wide gas flared volume from March to April decreased 6.1 MMCFD to 143.4 MMCF per day, the statewide percent flared was unchanged at 5% and Bakken gas capture percentage increased to 96%. The historical high flared percent was 36% in 09/2011.

Gas capture details are as follows:

Statewide	95%
Statewide Bakken	96%
Non-FBIR Bakken	95%
FBIR Bakken	98%
Trust FBIR Bakken	98%
Fee FBIR	97%
Deep Water Creek Bay	79%
Twin Buttes	58%
Charlson	90%

The Commission established the following gas capture goals:

74%	October 1, 2014 - December 31, 2014
77%	January 1, 2015 - March 31, 2016
80%	April 1, 2016 - October 31, 2016
85%	November 1, 2016 - October 31, 2018
88%	November 1, 2018 - October 31, 2020
91%	November 1, 2020

BLM On 1/27/21 President Biden issued an executive order that mandates a "pause" on new oil and gas leasing on federal lands, onshore and offshore, "to the extent consistent with applicable law," while a comprehensive review of oil and gas permitting and leasing is conducted by the Interior Department. There is no time limit on the review, which means the president's moratorium on new leasing is indefinite. The order does not restrict energy activities on lands the government holds in trust for Native American tribes.

On 7/7/21 North Dakota sued the Department of Interior (DOI), Secretary of Interior Debra Haaland, Bureau of Land Management (BLM), Director of the BLM Nada Culver, and Director of the Montana-Dakotas BLM John Mehlhoff in US District Court for the District of North Dakota. The lawsuit requested the court:

Compel the Federal Defendants to hold quarterly lease sales. Oral arguments are scheduled for 1/12/22 in Bismarck.

MONTHLY UPDATE

JUNE 2023 PRODUCTION & TRANSPORTATION

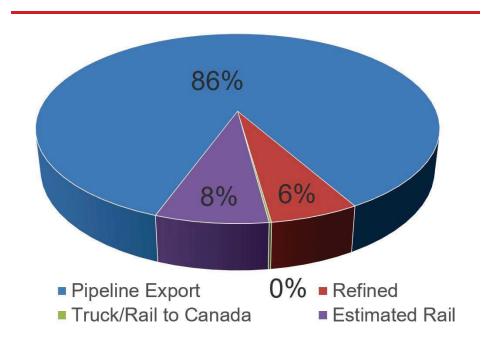
North Dakota Oil Production

Month	Monthly Total, BBL	Average, BOPD
Mar. 2023 - Final	34,852,951	1,124,289
Apr. 2023 - Prelim.	34,003,054	1,133,435

North Dakota Natural Gas Production

Month	Monthly Total, MCF	Average, MCFD
Mar. 2023 - Final	94,646,560	3,053,115
Apr. 2023 - Prelim.	93,513,871	3,117,129

Estimated Williston Basin Oil Transportation, Apr. 2023



CURRENT DRILLING ACTIVITY:

NORTH DAKOTA¹

38 Rigs

EASTERN MONTANA²

0 Rigs

SOUTH DAKOTA²

0 Rigs

SOURCE (JUNE 13, 2023):

1. ND Oil & Gas Division

2. Baker Hughes

PRICES:

Crude (WTI): \$69.67

Crude (Brent): \$74.55

NYMEX Gas: \$2.33

SOURCE: BLOOMBERG (JUNE 13, 2023 2PM EST

GAS STATS*

95% CAPTURED & SOLD

4% FLARED DUE TO
CHALLENGES OR
CONSTRAINTS ON EXISTING
GATHERING SYSTEMS

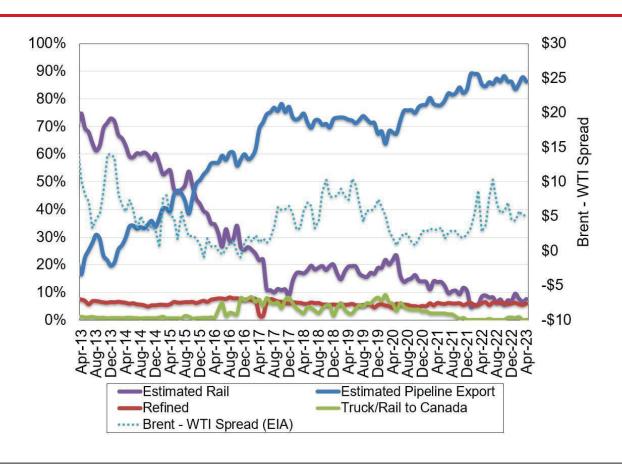
1% FLARED FROM WELL WITH ZERO SALES

*APR. 2023 NON-CONF DATA

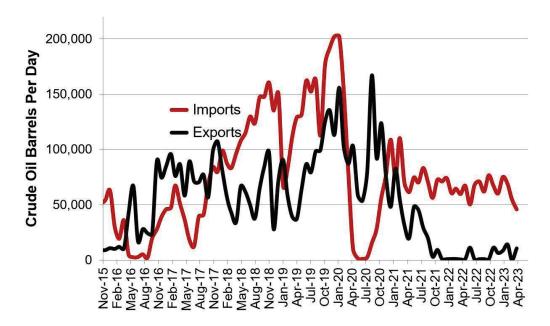
Estimated North Dakota Rail Export Volumes



Estimated Williston Basin Oil Transportation

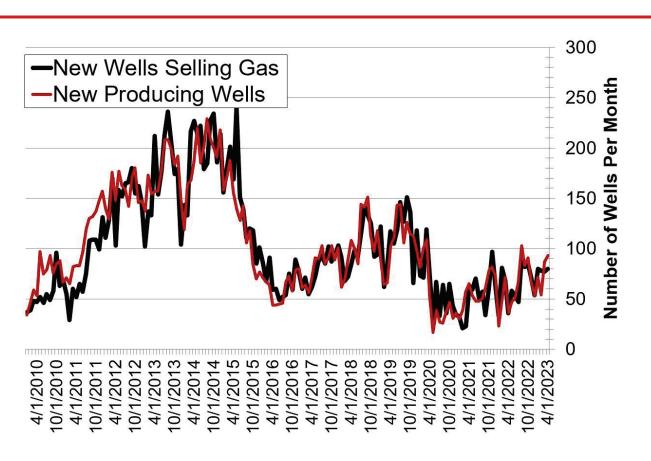


Williston Basin Truck/Rail Imports and Exports with Canada



Data for imports/exports chart is provided by the US International Trade Commission and represents traffic across US/Canada border in the Williston Basin area.

New Gas Sales Wells per Month



US Williston Basin Oil Production, BOPD

2022

MONTH	ND	EASTERN MT*	SD	TOTAL
January	1,091,931	51,895	2,709	1,146,535
February	1,095,503	51,165	2,742	1,149,410
March	1,129,936	54,580	2,709	1,187,225
April	908,697	54,118	2,338	965,153
May	1,062,228	53,276	2,648	1,118,152
June	1,099,366	63,262	2,764	1,165,392
July	1,073,624	60,604	2,774	1,137,002
August	1,075,801	60,526	2,756	1,139,083
September	1,126,138	58,096	2,679	1,186,913
October	1,122,122	54,260	2,621	1,179,003
November	1,098,415	57,715	2,682	1,158,812
December	957,864	56,721	2,199	1,016,784

2023

MONTH	ND	EASTERN MT*	SD	TOTAL
January	1,061,106	61,967	2,610	1,125,683
February	1,158,837	63,242	2,475	1,224,554
March	1,124,289	63,776	2,652	1,190,716
April	1,133,435			
May				
June				
July				
August				
September				
October				
November				
December		<u> </u>	_	

^{*} Eastern Montana production composed of the following Counties: Carter, Daniels, Dawson, Fallon, McCone, Powder River, Prairie, Richland, Roosevelt, Sheridan, Valley, Wibaux

https://www.reuters.com/world/us/us-judge-orders-enbridge-shut-down-portions-wisconsin-pipeline-within-3-years-2023-06-17/?taid=648e283acdd3ac0001ddac42&utm_campaign=trueAnthem:+Trending+Content&utm_medium=trueAnthem&utm_source=twitter

Judge orders Enbridge to shut down portions of Wisconsin pipeline within three years

By Clark Mindock

June 17, 202310:51 AM MDTUpdated 21 hours ago

Enbridge Inc logo is seen displayed in this illustration taken April 10, 2023. REUTERS/Dado Ruvic/Illustration/File Photo

June 17(Reuters) - A U.S. judge has ordered Canadian energy company Enbridge (ENB.TO) to shutter portions of an oil pipeline that runs through tribal land in Wisconsin within three years and to pay the tribe nearly \$5.2 million for trespassing plus a portion of its profits until the shutdown is completed.

U.S. District Judge William Conley issued the order on Friday in Madison. The judge's action came just over a month after the Bad River Band told him an immediate shutdown was needed following heavy spring rains that eroded a riverbank protecting the pipe. The pipeline carries 540,000 barrels of oil per day from Canada through the Great Lakes region.

An Enbridge spokesperson said on Saturday the company plans to appeal the judge's order.

In the ruling, Conley said a sudden shutdown could lead to oil shortages and price hikes in the United States, adding that "given the environmental risks, the court will order Enbridge to adopt a more conservative shutdown and purge plan."

Enbridge said in court filings ahead of the judge's action that a hasty shutdown of the pipeline was unnecessary and would cause "extreme market turmoil." The company has proposed re-routing the pipeline around the tribal reservation, but has not received federal approvals to do so.

Representatives for the tribe did not immediately respond to a request for comment.

The tribe has said a breach in the pipeline along the 12-mile (19 km) segment that runs through the reservation could pollute important fishing waters, wild rice habitat and potentially underground aquifers.

The tribe sued Enbridge in 2019, arguing that riverbank erosion threatened a "looming disaster" that warranted removal of the pipeline and saying that the company no longer had a legal right to operate on the property after pipeline easements allowing it to use the land expired in 2013.

Conley <u>ruled</u> last year that the pipeline was trespassing on the land but stopped short of ordering a shutdown due to public and <u>foreign policy concerns</u>. The judge in November said significant erosion that could cause a rupture was unlikely, but told the parties to develop a shutdown plan anyway. Reporting by Clark Mindock in New York; Editing by Will Dunham

https://tass.ru/ekonomika/18032757 16 June, 02:27, Updated June 16, 03:08 SPIEE

Shulginov said that gas production in Russia in 2023 is 8-10% lower than forecast

Oil production in Russia will decrease in 2023 by 20 million tons from the level of 2022 ST. PETERSBURG, June 16. /TASS/. Gas production by Russia is now 8-10% lower than the forecast, Russian Energy Minister Nikolai Shulginov said in an interview with Izvestia during the St. Petersburg International Economic Forum.

"We are guided by the forecasts that are provided for by the forecast of socio-economic development. Today we see a picture that production is 8-10% lower than those forecasts," he said.

At the same time, it is too early to name figures for gas exports, Shulginov noted. At the same time, Russia will increase LNG production in 2023 to 32 million tons from 30 million tons a year earlier, the Russian Energy Minister said.

"For liquefied gas, we are roughly guided by the figures that are included in the forecast [of socio-economic development]. An increase of 1-2 million tons, somewhere up to 32 million tons of LNG compared to 30 million last year," he said.

Earlier, the Ministry of Energy reported that Russia in 2022 reduced gas exports by 30.7% to 170.6 billion cubic meters. Gas production in the Russian Federation last year decreased by 11.7% to 673.8 billion cubic meters. At the same time, the Ministry of Energy of the Russian Federation expects a further decrease in gas production in Russia in 2023 due to the rejection of Russian gas by European consumers and the inability to instantly reorient gas flows.

Oil production

At the same time, according to the head of the Ministry of Energy, oil production in Russia will decrease in 2023 by 20 million tons from the level of 2022.

"The decline in oil production with condensate will probably be about 20 million tons from last year," he said.

rags:

RussiaShulginov, Nikolay GrigorievichSPIEF

Profiting from sanctions: Shipping premiums surge for Russian oil

Russian business shields bolder tanker owners from global rate pullback



Monday, June 12, 2023



Locations of tankers loaded with

Russian crude and products as of Monday. (Map: MarineTraffic)

Sanctions continue to work: Russian crude and diesel exports are still going strong, helping to keep world energy markets supplied, while steep price discounts are curbing revenues to Russia's government. Sanctions are also working for tanker owners. The shipowners bold enough to carry Russian oil and diesel have emerged as bigger winners, earning higher freight rates than in non-Russian trades.

Premiums earned for transporting Russian cargoes have recently surged even higher, according to data from price-reporting agency Argus. Over the past eight weeks, tankers loading Russian crude have earned 60% to 100% more in freight than tankers in comparable mainstream trades.

The Russian market "is becoming even more disconnected" from the rest of the tanker business, wrote Argus market reporter Matthew Mitchell and deputy freight editor John Ollett in a recent report.

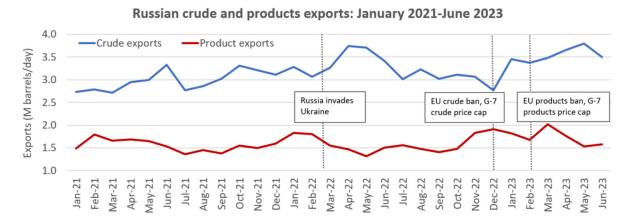
Russian crude and products exports stay strong

New data from Kpler confirms the ongoing strength in Russian export volumes. "The fact is that Russia continues to find downstream markets for its crude and products despite sanctions," Reid l'Anson, senior commodity analyst at Kpler, told FreightWaves.

Russian crude exports rose to 3.8 million barrels per (b/d) day in May, the highest level since before the pandemic. June crude exports averaged 3.5 million b/d through Monday, down from May but still 15% higher than the average in the 12 months prior to the invasion of Ukraine.

The vast majority of Russian crude is flowing to China and India, with smaller volumes to Turkey and Bulgaria, said l'Anson.

Russian petroleum products exports are averaging 1.6 million b/d so far this month, according to Kpler data. That's down from the record high of 2 million b/d in March, but still in line with pre-invasion volumes despite a boycott by the EU, formerly Russia's largest buyer.



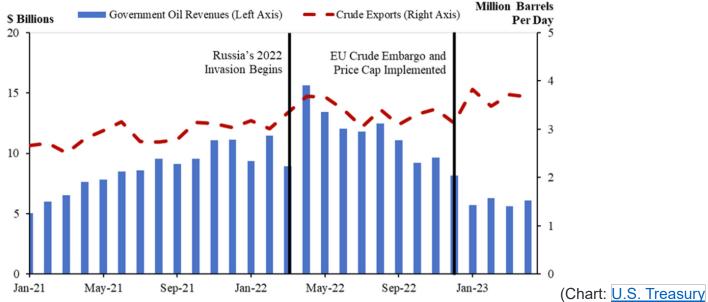
The June average through Monday. (Chart: FreightWaves based on data from Kpler)

"Flows [of Russian refined products] to Brazil have picked up considerably alongside flows to the Middle East and North and West Africa," said I'Anson.

Russian oil revenues fall

Russian oil revenues are falling despite higher export volumes, according to the U.S. Treasury Department, citing Russian government data.

Russian Oil Revenue and Seaborne Export Volumes



Department. Export data: International Energy Agency. Revenue data: Russian Ministry of Finance)

With the EU, the U.S. and other countries refusing to take Russian cargoes, competition among buyers has been reduced, forcing Russia to sell its exports at a discount.

As of Friday, Russian Urals crude was selling at \$23 to \$24 less per barrel than Brent crude, according to Argus data.

Russian Ministry of Finance data confirms that the federal government's oil revenues fell by more than 40% in the first quarter of 2023 compared to the same period last year despite higher volumes. Oil revenues accounted for 23% of Russia's total budget versus 30% to 35% prior to the war, said the U.S. Treasury Department.

Urals price flirts with cap, then falls

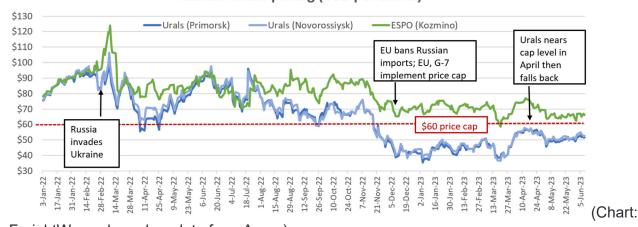
Steep discounts on Russian crude and products allow buyers to pay more for transport, a boon for tanker owners willing to load Russian cargoes.

Most of the crude exported from Russia's Pacific port of Kozmino is transported by Chinese and Russian tankers and vessels with opaque ownership in the so-called "shadow fleet." On the European side, Russian Urals crude shipped out of the port of Novorossiysk in the Black Sea and Primorsk in the Baltic Sea is carried by a mix of shadow tankers and mainstream European-owned tankers operating under the G-7 and EU price-cap regimes.

Russian diesel is priced far below the price cap, now set at \$100 per barrel, so there are no sanctions concerns. Russian crude out of Kozmino is above the \$60-per-barrel cap on Russian crude exports — meaning tankers subject to EU and G-7 sanctions should not be involved. (Several have been involved, however, prompting a warning from the U.S. regulator.)

As the price of Brent rose in April, the price of discounted Urals loading in Novorossiysk and Primorsk was pulled up near the cap level, raising the sanctions risk for European shipowners. Since then, Brent has fallen back, dragging down Urals, which is no longer at imminent risk of breaching the cap.

Russian crude pricing (USD per barrel)



FreightWaves based on data from Argus)

The pricing situation in April "led a lot of shipowners to step back from the market," wrote Argus' Mitchell and Ollett. Now that Urals has come down, "mainstream shipowners have returned."

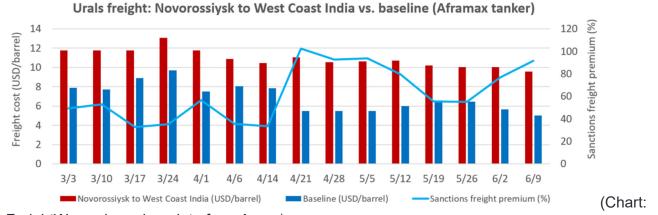
Russian trade outperforms broader market

Crude and product tanker spot rates have pulled back globally since April due to refinery maintenance, production cuts and other issues pressuring transport demand. But freight data from Argus shows that tankers in the Russian trade have been largely shielded from these declines. Consequently, the premiums earned by these tankers versus those in a comparable non-Russian trade have increased since April.

Argus recently launched a new pricing product that compares weekly Russian crude export freight rates to a non-Russian baseline. This data shows a jump in the Russian freight premium starting in mid-April, around the time Urals was flirting with the \$60-per-barrel cap level.

For an 80,000-ton cargo of Russian Urals loaded in Novorossiysk aboard an Aframax-class tanker and shipped to the west coast of India, Argus data shows that freight averaged \$3.43 per barrel more or 42% higher than the baseline rate between early March and mid-April.

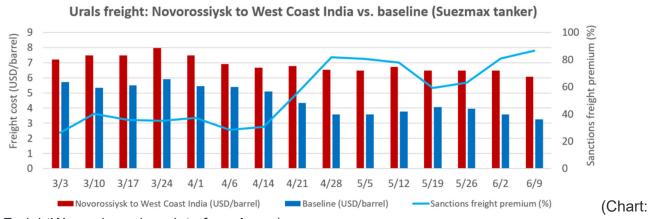
During the eight weeks from April 21 through Friday, the premium earned on this Russian route soared much higher, averaging \$4.59 per barrel more or 81% above the baseline.



FreightWaves based on data from Argus)

In the most recent week, Aframax owners carrying Russian cargo on this route earned a 92% "sanctions premium," according to Argus data.

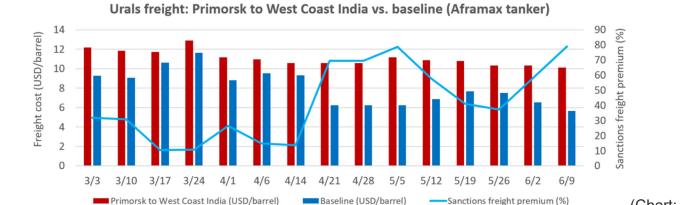
The same pattern is seen for larger Suezmax-class tankers loading 140,000-ton cargoes in Novorossiysk for delivery to the west coast of India. Argus data shows an average 33% premium versus the baseline for the weeks from March 3 to April 14, rising to an average 73% premium from April 21 to the week ending Friday as a result of the falling baseline rate.



FreightWaves based on data from Argus)

Aframaxes loading 100,000-ton cargoes at Primorsk in the Baltic Sea for delivery to India's west coast earned an average premium of \$1.87 per barrel, 20% above the baseline, between early March and mid-April.

Then average premium shot up \$3.98 per barrel, 61% above the baseline, in the weeks since then, according to Argus data. The Primorsk-India rate was 78% above the baseline rate in the most recent week.



FreightWaves based on data from Argus)

The initial rise in the Russian freight premium coincided with the pullback in cargo interest from mainstream operators worried about the price cap in April. But the return of these mainstream tankers to the Russian market since then has not brought the premium back down.

(Chart:

"Freight rates have not dropped as shipowners insist on repeating the last-done levels and are not lowering their offers," said Mitchell and Ollett. "Rates have balanced at their current levels and are not, for the moment, responding to shifts in the regular [non-Russian] spot market."

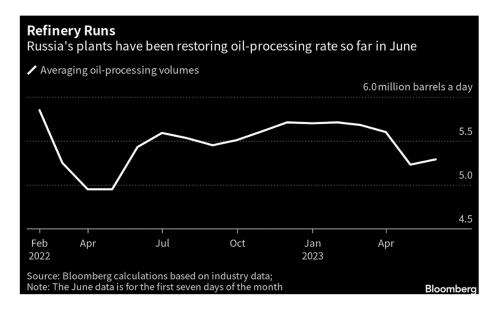
Click for more articles by Greg Miller

Russian Refiners' Oil Processing Rates Rise as Repairs Pass Peak 2023-06-09 16:58:06.921 GMT

By Bloomberg News

(Bloomberg) -- Russia's oil refineries have been accelerating their crude-processing rates, offering further evidence that the peak of spring maintenance has now passed. Primary processing rates averaged 5.29 million barrels a day in the first week of June, according to a person familiar with the matter. That's more than 94,000 barrels a day higher than in prior seven days, when nation's refineries started to ramp up.

Russia's crude supplies to domestic refineries, along with seaborne exports, remain the key gauges for oil market observers seeking clues to the nation's production after the government classified output data following Western sanctions.



Russia pledged to cut output by 500,000 barrels a day in March, in response to the measures, including G-7 price cap on its crude sales. The nation is implementing its cuts in full, Deputy Prime Minister Alexander Novak said over the past weekend.

Crude exports from ports continue to rise even amid higher supplies to domestic refineries, creating a question mark about how the output cuts are happening. Saudi Arabia, Russia's partner in the OPEC+ producer group, has called on Moscow to be transparent.

Four-week average shipments from Russia's ports, which smooth out some of the volatility in weekly numbers, edged higher in the period to June 4, rising to 3.73 million barrels a day from a revised 3.68 million in the period to May 28.

To contact Bloomberg News staff for this story:

James Herron in London at jherron@bloomberg.net

Oil Market Highlights

Crude Oil Price Movements

The OPEC Reference Basket (ORB) fell by \$8.31, or 9.9%, m-o-m to average \$75.82/b in May. The ICE Brent front-month contract declined by \$7.68, or 9.2%, m-o-m to \$75.69/b, and NYMEX WTI front-month contract declined by \$7.82, or 9.8%, m-o-m to average \$71.62/b. The DME Oman front-month contract declined by \$8.69, or 10.4% m-o-m, to settle at \$74.78/b. The front-month ICE Brent/NYMEX WTI spread widened by 14¢ m-o-m to average \$4.07/b in May. The futures forward curves of ICE Brent, NYMEX WTI and DME Oman weakened during the month, and hedge funds and other money managers heavily cut bullish positions in ICE Brent and NYMEX WTI.

World Economy

World economic growth is estimated at 3.3% for 2022 and forecast at 2.6% for 2023, both unchanged from the previous month's assessment. While economic activities have been steady so far in the 1H22, the global economy continues to navigate through uncertainties including high inflation, higher interest rates in the US and the Euro-zone, and high debt levels in many regions. The US economic growth forecast for 2023 is revised up by 0.1% to stand at 1.3%, following a growth of 2.1% for 2022. The Euro-zone's economic growth forecast for 2023 remains at 0.8%, following a growth of 3.5% for 2022. Japan's economic growth forecast remains at 1.0% for both 2022 and 2023. China's economic growth forecast remains at 5.2% for 2023, following a growth of 3.0% for 2022. India's 2022 economic growth estimate is unchanged at 6.7%, and the forecast for 2023 remains at 5.6%. Brazil's economic growth estimates for 2022 and 2023 are unchanged at 2.9% and 1.0%, respectively. Russia's growth is also unchanged, with an estimated contraction of 2.1% for 2022 and a forecast contraction of 0.5% for 2023.

World Oil Demand

The world oil demand growth estimate for 2022 remains unchanged from last month's assessment, with y-o-y growth of 2.5 mb/d. For 2023, the forecast for world oil demand growth remains broadly unchanged at 2.3 mb/d. China, Latin America, and the Middle East have been revised up slightly, while OECD Europe, Other Asia and Africa have been adjusted slightly lower. The OECD is expected to grow by about 50 tb/d and the non-OECD by about 2.3 mb/d in 2023.

World Oil Supply

Non-OPEC liquids supply is estimated to have grown by 1.9 mb/d in 2022, broadly unchanged from the previous month's assessment. The main drivers of liquids supply growth for 2022 were the US, Russia, Canada, Guyana, China and Brazil, while the largest declines were seen in Norway and Thailand. For 2023, non-OPEC liquids production growth remains unchanged from last month's assessment, at 1.4 mb/d, y-o-y. The main drivers of liquids supply growth are expected to be the US, Brazil, Norway, Canada, Kazakhstan and Guyana, while declines are expected primarily from Russia. Uncertainties remain related to US shale oil output potential and unplanned maintenance in 2023. OPEC NGLs and non-conventional liquids are forecast to grow by 0.1 mb/d in 2022 to average 5.39 mb/d and by 50 tb/d to average 5.44 mb/d in 2023. OPEC-13 crude oil production in May decreased by 464 tb/d m-o-m to average 28.06 mb/d, according to available secondary sources.

Product Markets and Refining Operations

Refinery margins in the US Gulf Coast (USGC) declined for the second-consecutive month in May to their lowest level this year. This downturn – attributable to rising refinery product output levels – was considerably more limited than that seen in April, with most of the decline driven by transport fuels. In Rotterdam, margins showed solid gains backed by stronger gasoline and fuel oil markets. Lower feedstock prices provided further support and led to mild gains for Asian refining economics. Preliminary estimates indicate that the global refinery intake rose further m-o-m in May, increasing 556 tb/d to average 81.3 mb/d.

Tanker Market

Dirty freight rates showed mixed movement in May. VLCCs experienced m-o-m declines on all monitored routes, with Middle East-to-East spot freight rates falling 27% as long-haul tanker demand declined. Suezmax rates recovered some of the previous month's losses, with rates on the USGC-to-Europe route increasing 35%. Aframax spot freight rates showed a strong performance on the Caribbean-to-US East Coast route, which jumped 121%, while Mediterranean routes saw a mixed performance, with intra-Med rates up 2% and Mediterranean-to-Northwest Europe rates down 9%. Clean freight rates showed declines on all reported routes, with the steepest losses on West of Suez routes.

Crude and Refined Products Trade

Preliminary data shows US crude imports increased m-o-m in May to average 6.4 mb/d. US crude exports exhibited a still strong performance, averaging 4.3 mb/d, although lower than the record level of 4.8 mb/d achieved in March. China's crude imports in April fell back from the high levels of the previous month, to average about 10.3 mb/d, although preliminary data shows a recovery in May to average 12.2 mb/d. China's product imports jumped 26% to reach a record high of 2.2 mb/d, driven by inflows of LPG, naphtha and fuel oil. In April, India's crude imports slipped further from the 10-month high seen in February to average a still robust 4.8 mb/d. India's product exports fell sharply from last month's high levels to average 1.1 mb/d. Japan's crude imports recovered in April from seasonal lows, averaging 2.9 mb/d. Japan's product exports, including LPG, continued to decline, averaging 378 tb/d in April, the lowest since the same month last year. Preliminary estimates for May show OECD Europe crude imports declined seasonally, while tanker tracking data shows product imports remaining close to year-ago levels.

Commercial Stock Movements

Preliminary April 2023 data sees total OECD commercial oil stocks up m-o-m by 30.2 mb. At 2,808 mb, they were 144 mb higher than the same time one year ago, but 74 mb lower than the latest five-year average and 119 mb below the 2015–2019 average. Within the components, crude stocks fell by 0.5 mb, while product stocks rose m-o-m by 30.6 mb. OECD commercial crude stocks stood at 1,384 mb in April. This was 77 mb higher than the same time a year ago, but 42 mb below the latest five-year average and 88 mb lower than the 2015–2019 average. Total product inventories stood at 1,424 mb, representing a surplus of 66 mb above the same time a year ago, However, this was 32 mb lower than the latest five-year average and 30 mb below the 2015–2019 average. In terms of days of forward cover, OECD commercial stocks fell m-o-m by 0.1 days in April to stand at 60.9 days. This is 2.9 days above the April 2022 level, but 3.3 days lower than the latest five-year average and 1.3 days below the 2015–2019 average.

Balance of Supply and Demand

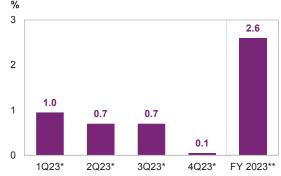
Demand for OPEC crude in 2022 remains unchanged from last month's assessment at 28.4 mb/d. This is around 0.5 mb/d higher than in 2021. Demand for OPEC crude in 2023 also remains unchanged from the previous assessment at 29.3 mb/d. This is around 0.9 mb/d higher than in 2022.

Feature Article

World oil market prospects for the second half of 2023

So far, both the US and the Euro-zone have experienced steady economic growth this year. Meanwhile, India, Brazil and Russia saw economic growths that clearly surpassed expectations. Moreover, the positive effects of China's reopening have continued supporting global economic growth. However, global economic growth in 2H23 continues navigating through uncertainties including elevated key-policy rates, persistently high core inflation and a continued tight labour market. Moreover, it is still unclear how the geopolitical conflict in Eastern Europe will be resolved.

Since the beginning of the year, the main economic Graph 1: World GDP growth, q-o-q and y-o-y support, at the global level, from the services sector, especially travel and transportation, tourism, leisure and hospitality. On the other hand, the manufacturing sector's dynamic has been very much lacklustre. This trend is expected to lead into the summer holiday season in the northern hemisphere, supported by still-sufficient disposable income levels, particularly in advanced economies. China is also benefitting from pent-up demand in the services sector after around three years of lockdowns. However, as the services sector-related spending tightens in 3Q23, inflation, financial tightening and rising geopolitical uncertainty, may dampen the growth dynamic towards the end of the year (see Graph 1).



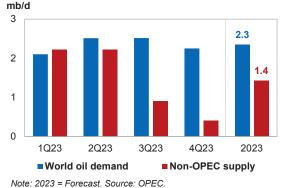
Note: * Q-o-q change and ** Y-o-y change. Source: OPEC.

Turning to the oil market, global oil demand is forecast to grow by 2.4 mb/d y-o-y in 2H23. For the year, world oil demand is forecast to grow by 2.3 mb/d (see Graph 2). In the OECD, oil demand is estimated to increase by 0.2 mb/d in 2H23 y-o-y, driven mostly by the US and Asia Pacific. However, OECD Europe is anticipated to be weak. In terms of products, jet kerosene and gasoline are anticipated to be the drivers of demand in the region, while diesel is expected to be subdued by weak economic activity and geopolitically induced supply-chain bottlenecks. Naphtha is also anticipated to remain in a contraction zone due to weak petrochemical margins. In the non-OECD, the opening of China and better-than-expected performance in other countries of the region are expected to drive oil demand. Improving driving mobility and air travel recovery, as well as improvements in manufacturing sector activity, are projected to support jet/ kerosene, gasoline and distillate demand. Oil demand in the non-OECD is forecast to grow on average by 2.2 mb/d y-o-y in 2H23, with China remaining the largest contributor to oil demand growth. In terms of main products, jet fuel is expected to lead oil demand growth in the region, followed by gasoline and diesel, and supported by the "other products" category.

1H23, the non-OPEC liquids supply is forecast to y-o-y changes grow by 0.7 mb/d y-o-y in 2H23. For the entire year, the non-OPEC liquids supply is anticipated to grow by 1.4 mb/d y-o-y (see Graph 2).

On a regional basis, OECD liquids supply is expected to grow by 1.3 mb/d y-o-y in 2H23, mainly in the US, with a projected increase of 0.8 mb/d, and additional incremental production is expected to come from Norway and Canada. However, liquids supply from the non-OECD region is forecast to drop by 0.7 mb/d y-o-y in 2H23. Higher production from Latin America, Other Eurasia and China is forecast to be more than offset by lower output in Russia, amid uncertainty, particularly regarding US shale oil developments, which continue to dominate in 2H23.

Following the estimated growth of 2.2 mb/d y-o-y in Graph 2: World oil demand and Non-OPEC supply,



Given the uncertainty in the world economy and global oil markets, the Declaration of Cooperation (DoC) countries have decided in their 35th OPEC and non-OPEC Ministerial Meeting to continue their precautious, proactive, and pre-emptive approach and hence maintain their production adjustments until end of 2024, while monitoring the market closely to support stability in the months to come.

World Oil Demand

World oil demand growth in 2022 remains broadly unchanged from last month at 2.5 mb/d y-o-y. However, a slight upward adjustment was effected in 4Q22, on the back of a slight improvement in OECD Americas in that quarter. Total world oil demand is expected to average 99.6 mb/d in 2022.

For 2023, the forecast for world oil demand growth is also unchanged from the previous month's assessment at 2.3 mb/d, with the OECD up by 0.05 mb/d y-o-y and non-OECD growth at close to 2.3 mb/d y-o-y. Minor downward adjustments were made to the OECD due to weak performance in the second quarter. Nevertheless, these were offset by minor upward adjustments due to better-than-expected performance in China's economy, while other regions are expected to see slight declines, due to economic challenges that are likely to weigh on oil demand. Accordingly, in 2Q23, oil demand is expected to rise by around 2.3 mb/d y-o-y. Total world oil demand is anticipated to reach 101.9 mb/d in 2023. However, this forecast is subject to many uncertainties, including global economic developments and ongoing geopolitical tensions.

Table 4 - 1: World oil demand in 2022, mb/d

							Change 2022/21	
World oil demand	2021	1Q22	2Q22	3Q22	4Q22	2022	Growth	%
Americas	24.32	24.77	24.98	25.33	24.95	25.01	0.70	2.86
of which US	20.03	20.38	20.41	20.62	20.32	20.43	0.40	1.98
Europe	13.13	13.19	13.43	14.07	13.34	13.51	0.38	2.90
Asia Pacific	7.38	7.85	6.99	7.22	7.68	7.43	0.05	0.70
Total OECD	44.82	45.81	45.39	46.62	45.97	45.95	1.13	2.52
China	15.00	14.77	14.45	14.67	15.51	14.85	-0.15	-0.98
India	4.77	5.18	5.16	4.95	5.26	5.14	0.37	7.66
Other Asia	8.67	9.13	9.31	8.77	8.89	9.02	0.36	4.11
Latin America	6.23	6.32	6.36	6.55	6.52	6.44	0.21	3.38
Middle East	7.79	8.06	8.15	8.53	8.44	8.29	0.50	6.45
Africa	4.22	4.51	4.15	4.25	4.69	4.40	0.18	4.21
Russia	3.61	3.67	3.42	3.45	3.71	3.56	-0.05	-1.48
Other Eurasia	1.21	1.22	1.16	1.00	1.21	1.15	-0.06	-5.07
Other Europe	0.75	0.79	0.75	0.73	0.80	0.77	0.01	1.75
Total Non-OECD	52.25	53.65	52.90	52.89	55.03	53.62	1.36	2.61
Total World	97.08	99.45	98.29	99.51	101.00	99.57	2.49	2.57
Previous Estimate	97.08	99.45	98.29	99.51	101.00	99.57	2.49	2.57
Revision	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00

Note: Totals may not add up due to independent rounding. Source: OPEC.

Table 4 - 2: World oil demand in 2023*, mb/d

	Change 2023/22							73/22
World oil demand	2022	1Q23	2Q23	3Q23	4Q23	2023	Growth	%
Americas	25.01	24.61	25.14	25.51	25.09	25.09	0.08	0.31
of which US	20.43	20.16	20.43	20.75	20.37	20.43	0.00	-0.01
Europe	13.51	12.93	13.33	14.10	13.37	13.43	-0.07	-0.53
Asia Pacific	7.43	7.89	7.05	7.27	7.70	7.47	0.04	0.55
Total OECD	45.95	45.44	45.52	46.87	46.15	46.00	0.05	0.10
China	14.85	15.63	15.56	15.43	16.16	15.70	0.84	5.69
India	5.14	5.40	5.41	5.21	5.50	5.38	0.24	4.75
Other Asia	9.02	9.40	9.65	9.14	9.24	9.35	0.33	3.67
Latin America	6.44	6.60	6.49	6.71	6.68	6.62	0.19	2.90
Middle East	8.29	8.63	8.47	8.86	8.73	8.67	0.38	4.55
Africa	4.40	4.69	4.34	4.43	4.88	4.59	0.19	4.21
Russia	3.56	3.68	3.45	3.59	3.87	3.65	0.09	2.49
Other Eurasia	1.15	1.24	1.16	1.02	1.22	1.16	0.01	1.15
Other Europe	0.77	0.84	0.76	0.75	0.83	0.80	0.03	3.61
Total Non-OECD	53.62	56.12	55.29	55.16	57.10	55.92	2.30	4.29
Total World	99.57	101.55	100.80	102.03	103.25	101.91	2.35	2.36
Previous Estimate	99.57	101.58	100.70	102.03	103.25	101.90	2.33	2.34
Revision	0.00	-0.03	0.10	0.00	0.01	0.02	0.02	0.02

Note: * 2023 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.

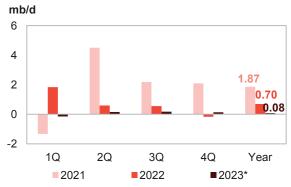
OECD

OECD Americas

Update on the latest developments

Oil demand in OECD Americas in March saw growth Graph 4 - 1: OECD Americas oil demand, y-o-y of 50 tb/d y-o-y, up from an annual decline of 0.3 mb/d change v-o-v in February. Oil demand was driven by requirements for transportation fuels in Canada and Mexico.

Gasoline demand in the region increased in March by 0.14 mb/d y-o-y, slightly below growth of 0.16 mb/d yo-y seen the previous month. Similarly, jet /kerosene posted y-o-y growth of 0.12 mb/d, compared with growth of 0.16 mb/d seen in February. Demand for LPG reversed a three-month long declining trend to show y-o-y growth of 0.1 mb/d. However, all other _2 products remained weak in OECD Americas in March.



Note: * 2023 = Forecast. Source: OPEC.

Oil demand in the **US** continued to decline for the fourth consecutive month by 61 tb/d y-o-y, albeit this being an improvement compared with the 0.4 mb/d y-o-y decline seen in February.

The manufacturing PMI in the US was still below expansion at 46.3 in March, sliding from 47.7 in February to remain in contraction for the sixth consecutive month. On the other hand, the services PMI was at 51.2 points in March, following 55.1 points in February. Similarly, the seasonally adjusted vehicle miles travelled for March 2023 showed an increase of 0.3% over March 2022. The International Air Transport Association's (IATA) Air Passenger Market Analysis reported that in March, international revenue passenger kilometres (RPKs) for airlines in North America grew by 51.6% and carriers in the US have mostly recovered to pre-pandemic levels with regard to domestic traffic.

The largest decline in oil demand among products in the US in March was seen in residual fuels, which recorded a y-o-y decline of 0.2 mb/d, compared with zero growth seen the previous month. As weak manufacturing activity continues to weigh, diesel demand continued to show a y-o-y decline for the fifth consecutive month, down by 60 tb/d y-o-y in March, albeit showing an improvement from the 0.2 mb/d y-o-y decline in February. Furthermore, the "other products" category also declined y-o-y by 80 tb/d, albeit this being an improvement from the y-o-y decline of 0.2 mb/d seen in February. Naphtha weakened by 10 tb/d y-o-y in March, following a y-o-y decline of about 30 tb/d in February.

On a positive note; on the back of improved mobility, demand for gasoline increased further from y-o-y growth of 0.1 mb/d in February to 0.15 mb/d y-o-y in March. Jet/kerosene also increased by almost 0.1 mb/d y-o-y, posting gains for the twenty fourth consecutive month. Finally, LPG saw growth of 40 tb/d y-o-y, compared with a y-o-y decline of more than 0.3 mb/d seen in February.

Table 4 - 3: US oil demand, mb/d

			Change	Mar 23/Mar 22
By product	Mar 22	Mar 23	Growth	%
LPG	3.55	3.59	0.04	1.0
Naphtha	0.16	0.14	-0.01	-7.7
Gasoline	8.86	9.01	0.15	1.7
Jet/kerosene	1.52	1.61	0.09	5.6
Diesel	4.16	4.10	-0.06	-1.4
Fuel oil	0.44	0.25	-0.19	-43.1
Other products	2.12	2.04	-0.08	-3.6
Total	20.80	20.74	-0.06	-0.3

Note: Totals may not add up due to independent rounding. Sources: EIA and OPEC.

Near-term expectations

In **2Q23**, GDP growth rates in the **US** are expected to remain steady and potentially slightly higher than observed in the first quarter. However, the manufacturing PMI should remain below growth-indicating levels for the sixth consecutive month. This continued weakening manufacturing activity is likely to impact on demand for industrial fuels. In the second quarter, US oil demand is projected to grow marginally y-o-y by 20 tb/d. Anticipated growth will be driven by transportation fuels, jet fuel and gasoline on the back of air travel recovery and the summer driving season, while diesel and petrochemical feedstock are anticipated to remain relatively weak due anticipated weaker manufacturing and petrochemical sector activity.

In **3Q23**, the peak driving season in the **US**, inflation is expected to continue to decline. Furthermore, the services PMI has shown signs of rebounding. Similarly, domestic airline activity has surpassed pre-pandemic levels and international travel is near 2019 levels. These factors are expected to support oil demand growth of 0.1 mb/d y-o-y in 3Q23. Transportation fuels, including jet/kerosene and gasoline, are expected to drive oil demand growth. However, risks are still skewed to the downside, with a focus on the macroeconomic performance of the US economy.

OECD Europe

Update on the latest developments

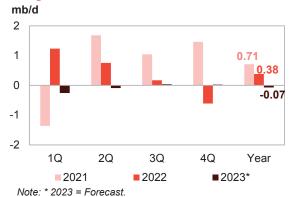
Oil demand in OECD Europe declined further in March by 0.2 mb/d y-o-y, although showing a slight improvement from the 0.3 mb/d y-o-y decline seen in February.

The region is still facing some macroeconomic headwinds. Inflation in the Euro-zone rose rather unexpectedly again, standing at 6.9% y-o-y in March. The Euro-zone's manufacturing PMI remained in contractionary territory, standing at 47.3 in March, down from 48.5 in February. Nevertheless, the PMI for services pointed to some improvement to stand at 55 points, up from 52.7 in February.

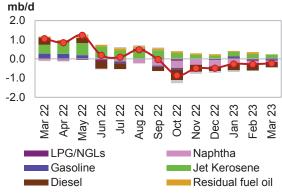
IATA reported that the region's airline domestic RPKs stood above pre-pandemic levels for the 11th consecutive month, with 10.4% growth seen over March 2019. Similarly, airlines carried 38.5% more international passenger traffic in March compared with the previous year, but remained 13.7% below the levels seen in 2019 for the same period.

Source: OPEC.

Graph 4 - 2: OECD Europe's oil demand, y-o-y change



Graph 4 - 3: OECD Europe's oil demand by main petroleum product category, y-o-y change



Sources: IEA, JODI, OPEC and national sources.

Diesel sustained a seventh consecutive monthly decline of 0.3 mb/d y-o-y, around the same decline seen in February. Likewise, demand for petrochemical feedstock also remained weak, with naphtha contracting by 50 tb/d y-o-y, although this was an improvement from the 0.2 mb/d y-o-y decline seen in February. LPG demand also softened by 0.1 mb/d y-o-y for a second consecutive month. The "other products" category additionally saw a decline of 30 tb/d y-o-y for the sixth consecutive month.

On the positive side, continued improvements in airline activity supported jet/kerosene growth, which was up by almost 0.2 mb/d, y-o-y broadly the same y-o-y growth rate as posted in February. Gasoline saw y-o-y growth of 50 tb/d, up from 30 tb/d y-o-y growth seen in the previous month. Finally, residual fuels remained flat in March, compared with a y-o-y increase of 0.1 mb/d in February.

Near-term expectations

In **2Q23**, GDP growth in the region is projected to be positive, though low. Furthermore, manufacturing activity is also anticipated to continue weakening due to slow economic activity and supply chain bottlenecks. Accordingly, oil demand growth in the quarter is anticipated to decline by 90 tb/d y-o-y, compared with an annual decline of 0.3 mb/d seen in the first quarter. Transportation fuels, most notably jet fuel and gasoline, are expected to support oil demand improvements in the second quarter.

By **3Q23**, oil demand in the region is expected to improve slightly to show only a marginal decline of 30 tb/d y-o-y compared with 2Q23. In this quarter as well, oil demand is anticipated to be mainly supported by jet fuel and gasoline. However, diesel and petrochemical feedstock are projected to remain weak. The risks, however, are skewed to the downside, hinging on geopolitical developments and the possibility of an economic recession in the region.

OECD Asia Pacific

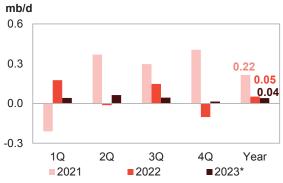
Update on the latest developments

Oil demand in OECD Asia Pacific saw growth of nearly 0.2 mb/d y-o-y in March, broadly the same as in February. Oil demand in the region was mostly driven by Australia, as demand for oil in the two largest oil-consuming countries of the region — Japan and South Korea — remained soft on the back of weak macroeconomic performance and continuing low manufacturing activity. The manufacturing PMIs for both Japan and South Korea were below the expansion threshold in March.

In **Japan**, the manufacturing PMI stood at 49.2 in March, albeit showing an improvement from 47.7 points in in February. However, Japan's services sector PMI rose to 55 points in March, compared with 54 points in February. Furthermore, the annual headline inflation in Japan fell slightly to 3.2% in March compared with 3.3% in February, which is still high for the country, increasing the likelihood of monetary tightening by the Bank of Japan.

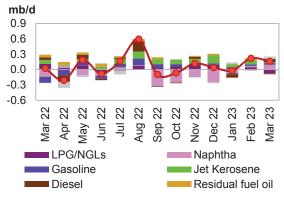
The **South Korean** manufacturing PMI in February also stood in contraction at 48.7 in March, almost the same as the 48.5 seen the previous month. The annual consumer price index in the country declined to 3.3% in March, compared with 4.8% in February, according to the Bank of Korea. This was the slowest annual rise since February 2021.

Graph 4 - 4: OECD Asia Pacific oil demand, y-o-y change



Note: * 2023 = Forecast. Source: OPEC.

Graph 4 - 5: OECD Asia Pacific oil demand, y-o-y change



Sources: IEA, JODI, METI and OPEC.

Airline activity in the **OECD Asia Pacific** region remained healthy, according to a report from the IATA. Asia Pacific carriers continued to show strong signs of recovery in March, with annual growth of 283.1% seen in international RPKs. Over the same period, the region's airlines saw its RPKs increase to 64.4% of pre-pandemic levels. International traffic flows from and within the area continued to see recovery and growth. Within the Asia Pacific region, traffic reached 53.1% of pre-pandemic levels.

Looking at the contribution of specific products in March oil demand, naphtha led overall demand growth by nearly 10 tb/d y-o-y, down from 20 tb/d y-o-y growth seen in February. Diesel saw y-o-y growth of 60 tb/d, from a slight annual decline of 13 tb/d y-o-y the previous month. The "other products" category saw y-o-y growth of 50 tb/d, up from 10 tb/d y-o-y growth in February. Gasoline recorded y-o-y growth of 30 tb/d for the second consecutive month.

Demand for naphtha was in contraction for five consecutive months prior to February 2022, as average run rates at major naphtha cracking centres were in decline due to a slowdown in the manufacturing and construction sectors, which typically drive demand for various petrochemical products. However, the opening of China has seen naphtha improving to show y-o-y growth for a second consecutive month in March. Furthermore, on the back of an improvement in air travel activity in the region, jet kerosene saw y-o-y growth of around 20 tb/d, however, this is a slight decline from the almost 90 tb/d y-o-y growth seen in February. LPG saw a y-o-y contraction of 90 tb/d in March, down from the 50 tb/d y-o-y growth seen in February.

Near-term expectations

The region's GDP is projected to remain positive in 2023, supporting services and manufacturing activity. The services PMIs in Japan and Australia are on a rising trend, reaching 56 point and 52.6 points, respectively, in March. Furthermore, petrochemical feedstock requirements are likely to get a boost from the opening of the Chinese economy, which will also support the petrochemical industry of the entire region. Accordingly, OECD Asia Pacific's oil demand is projected to grow y-o-y by 60 tb/d in **2Q23**.

In **3Q23**, further improvements in air traffic and driving mobility, combined with the ongoing recovery in petrochemical industry operations, are anticipated to support oil demand growth to the tune of 40 tb/d y-o-y, mainly supported by jet fuel, gasoline and petrochemical feedstock.

Non-OECD

China

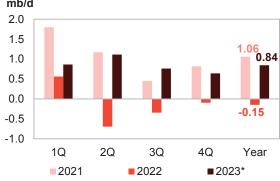
Update on the latest developments

Beyond expectations, oil demand in **China** posted considerable 3 mb/d y-o-y growth in April, following already healthy 1.4 mb/d y-o-y growth in March. M-o-m oil demand in the country increased by 1.8 mb/d. Growth in oil demand was supported by a weak baseline and healthy economic activity, amid strong petrochemical industry requirements.

In April, the services PMI was in expansion zone at 56.4, reflecting strong momentum in business and social activity after the reopening of the country from lockdown.

Similarly, the National Bureau of Statistics of China Graph 4 - 6: China's oil demand, y-o-y change shows that daily highway traffic in China during mb/d 29 April to 3 May more than doubled y-o-y to some 9% higher than 2019 levels. During same period, domestic air travel demand soared, with daily passenger flights surging to 14% higher than levels during the same period in 2019, and international flights reached 30% of 2019 levels in early April.

However, the manufacturing PMI decelerated into contraction at 49.2 points in April, from 51.9 points in March.



Note: * 2023 = Forecast. Source: OPEC.

Diesel led demand in China's April overall demand mix with 0.8 mb/d y-o-y growth, up from an increase of 0.3 mb/d y-o-y in March. Diesel has been the most important refined product in China's oil demand palette, accounting for a third of consumption. The product is consumed in industry as well as in freight, fuelling trucks and commercial vehicles in construction and agricultural sector activity. On the back of a surge in mobility, gasoline demand also rose strongly by 0.6 mb/d y-o-y from 0.1 mb/d y-o-y growth in March. Similarly, strong air travel activity supported jet fuel to post y-o-y growth of 0.4 mb/d, up from 0.2 mb/d y-o-y growth in March. On the back of considerable petrochemical sector requirements, LPG posted y-o-y growth of more than 0.5 mb/d, up from a 30 tb/d annual decline in March. Furthermore, naphtha saw y-o-y growth of almost 0.2 mb/d. Finally, residual fuels saw y-o-y growth of 0.6 mb/d, while the "other fuels" category increased by 0.1 mb/d, almost the same as in March.

Table 4 - 4: China's oil demand*, mb/d

			Change	Apr 23/Apr 22
By product	Apr 22	Apr 23	Growth	%
LPG	1.92	2.45	0.53	27.5
Naphtha	1.37	1.53	0.16	11.5
Gasoline	3.34	3.90	0.56	16.7
Jet/kerosene	0.55	0.93	0.38	68.8
Diesel	2.84	3.67	0.83	29.1
Fuel oil	0.63	1.19	0.56	89.3
Other products	3.02	3.12	0.10	3.4
Total	13.68	16.79	3.12	22.8

Note: * Apparent oil demand. Totals may not add up due to independent rounding. Sources: Argus Global Markets, China OGP (Xinhua News Agency), Facts Global Energy, JODI, National Bureau of Statistics China and OPEC.

Near-term expectations

Oil demand for most products in China has been very healthy since the abandonment of COVID-19 lockdown restrictions. Furthermore, China's GDP growth is anticipated to remain firm at 5.2% in 2023. Similarly, the road transport index and domestic flight counts have already exceeded pre-pandemic levels, and international flights recently approached 50% of 2019 levels. Finally, petrochemical feedstock demand is also healthy, with more petrochemical plants expected to come on stream, including the Yantai Shandong Petrochemical plant. These factors are anticipated to support oil demand in the near term.

In 2Q23, oil demand is set to see y-o-y growth of 1.1 mb/d. Domestic and international airline activity is expected to rise, as momentum in international business and tourism continues. This is also providing support for jet fuel demand to spur oil demand growth. Gasoline demand is forecast to improve, driven by a strong rebound in mobility. Similarly, healthy petrochemical industry operations will boost feedstock demand for light distillates. Fiscal stimulus, along with infrastructure expansion in 2023, will set the stage for a robust diesel consumption recovery.

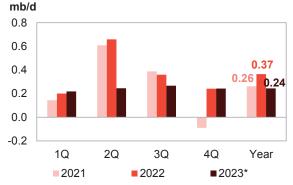
In 3Q23, oil demand is expected to increase y-o-y by a solid 0.8 mb/d. Jet fuel will again drive oil demand growth in this quarter, with millions of air passengers expected to support air travel activity for local and business travellers to and from China. Light distillates are also expected to continue rising, with ongoing expansion in petrochemical industries. Increased mobility and rising construction activity will boost demand for gasoline and diesel.

India

Update on the latest developments

Oil demand in India declined by 10 tb/d y-o-y in April, Graph 4 - 7: India's oil demand, y-o-y change after over one year of uninterrupted monthly y-o-y growth. The "other products" category saw a strong yo-y decline by 0.3 mb/d, which more than offset the demand growth of other oil products seen in April. The decline relates specifically to bitumen and petcoke demand, which have been capped by lower construction activities and substitution.

Both the manufacturing and services sectors in India have been performing very well to support oil demand for over a year. The manufacturing PMI in India continued to expand, reaching a strong 57.2 in April, after seeing an already high 56.4 in March. Similarly, the services PMI indicated ongoing strong momentum, rising to 62 points in April, compared with 57.8 in March. In addition, annual consumer inflation eased to 4.7% in April from 5.6% in March. In addition, annual consumer inflation eased to 4.7% in April from 5.6% in March.



Note: * 2023 = Forecast.

Source: OPEC.

According to the automotive content creator autopunditz.com, vehicles sales in the Indian market increased by over 13% compared with April one year ago.

Despite the strong decline seen in the "other products" category, demand for other oil products remained healthy in April. On the back of healthy manufacturing, mining and agricultural activity, diesel saw y-o-y growth of 0.2 mb/d, up from a y-o-y increase of 20 tb/d in March. Naphtha improved by 30 tb/d y-o-y growth in April, compared with almost zero growth in March. Healthy mobility and improved air travel activity supported gasoline and jet/ kerosene growth of around 20 tb/d y-o-y for each. Similarly, residual fuels saw 20 tb/d v-o-v growth, up from no v-o-v growth in March.

Table 4 - 5: India's oil demand, mb/d

			Change	Apr 23/Apr 22
By product	Apr 22	Apr 23	Growth	%
LPG	0.86	0.86	0.00	-0.2
Naphtha	0.31	0.35	0.03	9.9
Gasoline	0.81	0.83	0.02	2.8
Jet/kerosene	0.19	0.20	0.02	9.1
Diesel	1.81	1.99	0.18	9.8
Fuel oil	0.16	0.18	0.02	11.6
Other products	1.02	0.74	-0.27	-26.8
Total	5.16	5.15	-0.01	-0.2

Note: Totals may not add up due to independent rounding.

Sources: JODI, Petroleum Planning and Analysis Cell of India and OPEC.

Near-term expectations

Looking forward, with anticipated healthy economic activity and ongoing growth in air travel, India's demand for oil products is anticipated to remain strong in 2023.

In 2Q23, oil demand is projected to rise by 0.3 mb/d y-o-y. The government's proposed increase in capital spending is expected to boost the momentum of economic development, as construction and manufacturing activity accelerates. These factors, combined with a steady rise in airline activity, will support healthy oil demand growth.

In 3Q23, oil demand is expected to remain solid at 0.3 mb/d, with transportation fuels, notably gasoline, transportation diesel and jet/kerosene, expected to be the drivers. However, in 3Q23, oil demand is anticipated to be affected by the impact of the monsoon season from July to September.

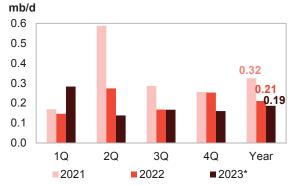
Latin America

Update on the latest developments

Oil demand in Latin America increased y-o-y by Graph 4 - 8: Latin America's oil demand, y-o-y 0.4 mb/d in March, up from 0.3 mb/d y-o-y growth change seen in February. Brazil, Argentina and Venezuela were the main drivers of oil demand in the region.

Annual inflation in Brazil has been seen to slow further to 4.2% in March, from 5.6% in February, but remained above the Central Bank's target of 3.25%. The services PMI in Brazil rose from 49.8 points in February to 51.8 points in March. However, Brazil's manufacturing PMI index in March stood in contraction territory at 46.9 points, down from 49 points in February.

Airline activity in Latin America continued to improve, as IATA's monthly statistics show that domestic RPKs in the region remained above pre-pandemic levels, and international RPKs grew by 36.5% y-o-y in March.



Note: * 2023 = Forecast.

Source: OPEC.

For the third consecutive month, gasoline remained the main driver of oil demand in the region, supported by a recovery in mobility, as gasoline grew by around 150 tb/d y-o-y for the second consecutive month. Residual fuels also saw more than 0.1 mb/d y-o-y growth in March. Similarly, diesel saw y-o-y growth by more than 0.1 mb/d, up from a y-o-y decline of 20 tb/d in February. Jet/kerosene saw y-o-y growth of 30 tb/d, following a similar y-o-y increase a month earlier. In terms of petrochemical feedstock, LPG saw y-o-y growth of 25 tb/d. The "other products" category, as well as demand for naphtha, remained broadly flat y-o-y in March.

Near-term expectations

In the near term, oil demand is anticipated to see y-o-y growth by more than 0.1 mb/d in 2Q23, as GDP growth for the region is anticipated to remain positive in 2023. The services PMI in Brazil, one of the major oil consuming countries in the region, has been steadily in expansion for more than one year, and is anticipated to support demand for transportation fuels. Accordingly, jet fuel and gasoline are forecast to be the main drivers for oil demand growth in the quarter. Additionally, expected improvements in manufacturing activity and petrochemical feedstock requirements should support demand for distillates.

In 3Q23, projected further mobility and air travel improvements are expected to increase momentum in transportation fuel demand, leading to growth of almost 0.2 mb/d y-o-y. The outlook sees transportation fuels growing the most, followed by diesel and petrochemical feedstock.

Middle East

Update on the latest developments

The Middle East posted strong growth of 0.6 mb/d y-o-y in March, broadly the same growth level for the fourth consecutive month. Saudi Arabia and Iraq were the main drivers of oil demand in March.

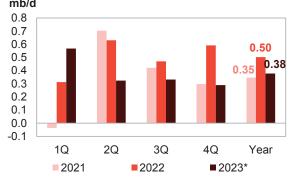
The purchasing managers' indices (PMIs) for March reflect continuing acceleration in composite PMIs in the major economies of the region, suggesting ongoing strong economic activity. Saudi Arabia's composite PMI rose to 58.7 points and the UAE posted a strong composite PMI of 55.8 points in March.

Similarly, the IATA reported that domestic airline traffic within the Middle East in March, in terms of international RPKs performed by Middle East carriers, grew by 43.1% y-o-y, recovering to 92.5% of 2019 levels.

Looking at oil products in the Middle East, the largest **Graph** increase for the second consecutive month was **mb/d** recorded in the 'other products' category at 0.8 0.26 mb/d. In addition, diesel posted y-o-y growth of 0.7 0.1 mb/d. Strong growth in airline activity in the 0.6 Middle East region boosted jet/kerosene demand by 0.5 0.1 mb/d for the third consecutive month in March.

At the same time, gasoline inched up by 15 tb/d y-o-y, and residual fuels increased by 70 tb/d y-o-y. Furthermore, petrochemical feedstock LPG and naphtha saw y-o-y growth of 30 tb/d and 10 tb/d, y-o-y, respectively.

Looking at oil products in the Middle East, the largest Graph 4 - 9: Middle East's oil demand, y-o-y change



Note: * 2023 = Forecast. Source: OPEC.

Table 4 - 6: Saudi Arabia's oil demand, mb/d

			Change	Apr 23/Apr 22
By product	Apr 22	Apr 23	Growth	%
LPG	0.05	0.05	0.00	8.5
Gasoline	0.47	0.49	0.02	4.1
Jet/kerosene	0.09	0.09	0.00	2.3
Diesel	0.54	0.54	0.00	-0.8
Fuel oil	0.60	0.64	0.04	6.1
Other products	0.48	0.45	-0.03	-5.7
Total	2.23	2.26	0.03	1.3

Note: Totals may not add up due to independent rounding.

Sources: JODI and OPEC.

Near-term expectations

Expected healthy economic activity and steadily rising composite PMIs in the major consuming countries in the region, combined with strong growth in airline activity, are expected to support oil demand growth in the Middle East by 0.3 mb/d y-o-y in both **2Q23** and **3Q23**. Moreover, demand growth in the region is expected to be supported by fuel oil for electricity generation in Iraq and Saudi Arabia, particularly in the hot summer months, combined with an expected increase in activity during the upcoming Hajj pilgrimage in June and July.

World Oil Supply

Non-OPEC liquids supply in 2022 (including processing gains) is estimated to have grown y-o-y by 1.9 mb/d to average 65.7 mb/d. This is largely unchanged from the previous month's assessment. Total US liquids production is estimated to have increased y-o-y by 1.2 mb/d to average 19.2 mb/d in 2022, which was the largest increase across the year.Russia, Canada, Guyana and China are all estimated to have grown by around 0.2 mb/d y-o-y. At the same time, production is estimated to have ssen the largest declines in Norway and Thailand.

Non-OPEC liquids production in 2023 is forecast to grow y-o-y by 1.4 mb/d to average 67.2 mb/d, unchanged from last month. Minor downward revisions to Other Asia and some other countries were offset by upward revisions to liquids production, mainly OECD Americas.

US crude oil and condensate production in March 2023 was the highest since March 2020, at the start of the COVID-19 pandemic. Output in 1Q23 was around 10% higher than the same period last year. At the same time, NGLs production in 1Q23 was up y-o-y by 40%. The overall oil rig count has dropped for several consecutive weeks, however, it is expected to be essentially above maintenance requirements. Gradual and steady growth is expected for US shale oil production throughout the year. Accordingly, US liquids supply growth for 2023 is forecast at 1.1 mb/d. Output growth in the North Sea region remains broadly unchanged following scheduled production ramp-ups in Norway. The main growth drivers for 2023 are anticipated to be the US, Brazil, Norway, Canada, Kazakhstan and Guyana, whereas oil production is forecast to decline primarily in Russia. Nevertheless, there remain uncertainties related to US shale oil output potential and unplanned maintenance in 2023.

OPEC NGLs and non-conventional liquids production in 2022 is forecast to have grown by 0.1 mb/d to average 5.4 mb/d, and is expected to increase by 50 tb/d to average 5.4 mb/d in 2023. OPEC-13 crude oil production in May decreased by 464 tb/d m-o-m to average 28.06 mb/d, according to available secondary sources.

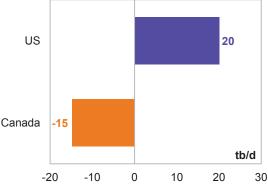
Non-OPEC liquids production in May, including OPEC NGLs, is estimated to have declined m-o-m by 0.6 mb/d to average 72.2 mb/d, but is up by 2.0 mb/d y-o-y. As a result, preliminary data indicates that May's global oil supply decreased by 1.0 mb/d m-o-m to average 100.2 mb/d, up by 1.7 mb/d y-o-y.

Estimates for non-OPEC liquids supply in 2022 Graph 5 - 1:Major revisions to annual supply remained broadly unchanged at an average of change forecast in 2023*, MOMR June 23/May 23 65.7 mb/d, with y-o-y growth of 1.9 mb/d.

Non-OPEC liquids production in 2023 is forecast to expand by 1.4 mb/d. This is broadly unchanged with the previous month's assessment, following some up and down revisions in a number of countries.

Overall **OECD supply growth** expectations for 2023 have risen slightly. While OECD Europe saw minor downward revisions, OECD Americas was revised up slightly. OECD Asia Pacific was broadly unchanged from the previous month's assessment.

The non-OECD supply growth projection for 2023 has been revised down marginally and is now expected to drop y-o-y by around 0.1 mb/d.

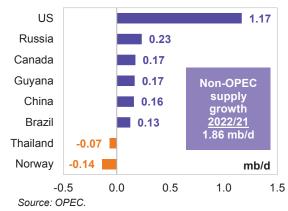


Note: * 2023 = Forecast. Source: OPEC.

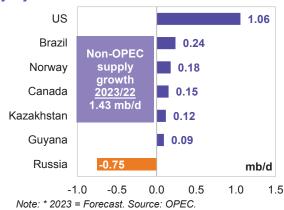
Key drivers of growth and decline

The **key drivers of non-OPEC liquids supply growth in 2022** are estimated to be the US, Russia, Canada, Guyana, China and Brazil, while oil production is expected to see the largest declines in Norway and Thailand.

Graph 5 - 2: Annual liquids production changes y-o-y for selected countries in 2022



Graph 5 - 3: Annual liquids production changes y-o-y for selected countries in 2023*



For **2023**, the key drivers of non-OPEC supply growth are forecast to be the US, Brazil, Norway, Canada, Kazakhstan and Guyana, while oil production is projected to see the largest decline in Russia.

Non-OPEC liquids production in 2022 and 2023

Table 5 - 1: Non-OPEC liquids production in 2022, mb/d

		•					Change 2	2022/21
Non-OPEC liquids production	2021	1Q22	2Q22	3Q22	4Q22	2022	Growth	%
Americas	25.45	26.09	26.50	27.26	27.50	26.84	1.40	5.48
of which US	18.04	18.51	19.07	19.57	19.68	19.21	1.17	6.47
Europe	3.79	3.72	3.46	3.51	3.59	3.57	-0.22	-5.79
Asia Pacific	0.51	0.49	0.51	0.43	0.49	0.48	-0.03	-6.23
Total OECD	29.75	30.30	30.48	31.20	31.58	30.89	1.14	3.85
China	4.32	4.54	4.54	4.42	4.42	4.48	0.16	3.70
India	0.78	0.79	0.78	0.76	0.76	0.77	-0.01	-0.80
Other Asia	2.42	2.37	2.32	2.24	2.31	2.31	-0.11	-4.74
Latin America	5.96	6.11	6.18	6.46	6.59	6.34	0.38	6.35
Middle East	3.19	3.23	3.28	3.32	3.30	3.29	0.10	3.16
Africa	1.34	1.31	1.30	1.31	1.28	1.30	-0.04	-3.17
Russia	10.80	11.33	10.63	11.01	11.17	11.03	0.23	2.15
Other Eurasia	2.93	3.04	2.76	2.59	2.92	2.83	-0.10	-3.34
Other Europe	0.11	0.11	0.11	0.10	0.10	0.11	-0.01	-6.36
Total Non-OECD	31.85	32.82	31.90	32.22	32.86	32.45	0.60	1.89
Total Non-OPEC production	61.60	63.12	62.38	63.42	64.44	63.34	1.75	2.84
Processing gains	2.29	2.40	2.40	2.40	2.40	2.40	0.11	4.90
Total Non-OPEC liquids production	63.88	65.52	64.78	65.82	66.84	65.74	1.86	2.91
Previous estimate	63.90	65.55	64.80	65.83	66.85	65.76	1.86	2.91
Revision	-0.02	-0.03	-0.02	-0.02	-0.01	-0.02	0.00	0.00

Note: Totals may not add up due to independent rounding. Source: OPEC.

Table 5 - 2: Non-OPEC liquids production in 2023*, mb/d

							Change 2	2023/22
Non-OPEC liquids production	2022	1Q23	2Q23	3Q23	4Q23	2023	Growth	%
Americas	26.84	27.87	27.90	28.21	28.44	28.11	1.26	4.71
of which US	19.21	20.07	20.18	20.34	20.47	20.26	1.06	5.50
Europe	3.57	3.66	3.69	3.80	3.94	3.77	0.20	5.66
Asia Pacific	0.48	0.46	0.48	0.49	0.48	0.48	0.00	-0.79
Total OECD	30.89	32.00	32.06	32.50	32.85	32.36	1.46	4.73
China	4.48	4.63	4.59	4.50	4.50	4.56	80.0	1.73
India	0.77	0.76	0.78	0.78	0.78	0.78	0.00	0.52
Other Asia	2.31	2.33	2.35	2.34	2.37	2.35	0.04	1.61
Latin America	6.34	6.70	6.67	6.70	6.79	6.72	0.38	5.95
Middle East	3.29	3.27	3.29	3.30	3.30	3.29	0.00	0.10
Africa	1.30	1.26	1.32	1.32	1.31	1.31	0.01	0.61
Russia	11.03	11.23	10.38	9.76	9.78	10.28	-0.75	-6.81
Other Eurasia	2.83	2.99	2.98	2.94	2.98	2.97	0.14	5.07
Other Europe	0.11	0.10	0.10	0.10	0.10	0.10	0.00	-2.83
Total Non-OECD	32.45	33.28	32.46	31.75	31.92	32.35	-0.10	-0.32
Total Non-OPEC production	63.34	65.28	64.52	64.26	64.77	64.70	1.36	2.15
Processing gains	2.40	2.47	2.47	2.47	2.47	2.47	0.07	2.96
Total Non-OPEC liquids production	65.74	67.75	66.99	66.73	67.24	67.17	1.43	2.18
Previous estimate	65.76	67.62	66.90	66.82	67.44	67.19	1.43	2.17
Revision	-0.02	0.12	0.10	-0.10	-0.20	-0.02	0.00	0.00

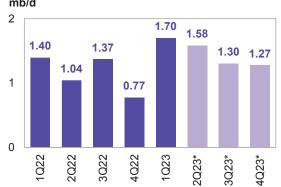
Note: * 2023 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.

OECD

OECD liquids production in 2022 is estimated to Graph 5 - 4: OECD quarterly liquids supply, have increased y-o-y by 1.1 mb/d to average y-o-y changes 30.9 mb/d. This is primarily unchanged compared mb/d with last month.

For 2023, oil production in the OECD region is forecast to expand by 1.5 mb/d to average 32.4 mb/d. This is revised up by a minor 6 tb/d, mainly due to changes in OECD Americas.

Growth is expected to be led by OECD Americas, which will expand by 1.3 mb/d to average 28.1 mb/d. This is an upward revision of 14 tb/d compared with last month's assessment, due to higher expected growth in the US and Mexico. Yearly liquids production in OECD Europe is anticipated to grow by 0.2 mb/d to average 3.8 mb/d, down by a minor 8 tb/d compared with the previous month. OECD Asia Pacific is expected to remain largely unchanged at an average 0.5 mb/d.



Note: * 2Q23-4Q23 = Forecast. Source: OPEC.

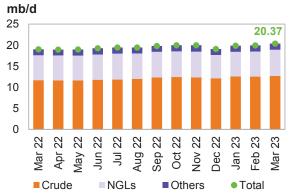
OECD Americas

US

US liquids production in **March** jumped m-o-m by 430 tb/d to average 20.4 mb/d, the highest level on record. This was up by 1.3 mb/d compared with March 2022.

Crude oil and condensate production rose Graph 5 - 5: US monthly liquids output by key m-o-m by 171 tb/d in March 2023 to average component 12.7 mb/d, up y-o-y by 1.0 mb/d.

In terms of crude and condensate production breakdown by region (PADDs), production increased mainly in the US Gulf Coast (USGC) region. rising by 163 tb/d to average 9.2 mb/d. Production in the Midwest, however, fell by 23 tb/d to 1.7 mb/d. While the East Coast remained broadly unchanged m-o-m, output in the Rocky Mountain region increased by 43 tb/d and in the West Coast it fell by 10 tb/d. Onshore production growth in the main regions was primarily driven by a strong recovery in Texas and Gulf of Mexico (GoM) fields.



Sources: EIA and OPEC.

NGLs production was up m-o-m by 250 tb/d to average 6.2 mb/d in March. This was higher y-o-y by 0.3 mb/d. According to the US Department of Energy (DoE), production of non-conventional liquids (mainly ethanol) remained chiefly unchanged m-o-m at an average of 1.5 mb/d. Preliminary estimates see non-conventional liquids averaging around 1.5 mb/d in April, largely unchanged compared with March.

GoM production rose m-o-m by 45 tb/d to average 1.9 mb/d in March, with normal production seen in most Gulf Coast offshore platforms with the exception the expected Mars reduction due to the Vito oil field tie-in processes. In the onshore Lower 48, crude and condensate production increased m-o-m by 137 tb/d to average 10.4 mb/d in March.

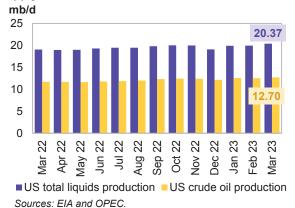
Table 5 - 3: US crude oil production by selected state and region, tb/d

				Cha	nge
State	Mar 22	Feb 23	Mar 23	m-o-m	у-о-у
Texas	4,976	5,301	5,398	97	422
Gulf of Mexico (GOM)	1,691	1,827	1,872	45	181
New Mexico	1,468	1,802	1,824	22	356
North Dakota	1,110	1,128	1,095	-33	-15
Alaska	440	446	435	-11	-5
Colorado	439	418	441	23	2
Oklahoma	408	421	429	8	21
Total	11,701	12,525	12,696	171	995

Sources: EIA and OPEC.

Looking at individual states, New Mexico's oil production rose by 22 tb/d to average 1.8 tb/d, which is 356 tb/d higher than a year ago. Production from Texas was up by 97 tb/d to average 5.4 mb/d, which is 422 tb/d higher than a year ago. In the Midwest, North Dakota's production fell m-o-m by 33 tb/d to average 1.1 mb/d, down v-o-v by 15 tb/d. Oklahoma's production was up m-o-m by 8 tb/d to average 0.4 mb/d. Production in Alaska dropped by 11 tb/d, while output in Colorado jumped m-o-m by 23 tb/d.

Graph 5 - 6: US monthly crude oil and total liquids supply

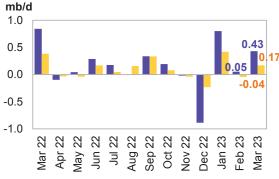


US tight crude output in March is estimated to have Graph 5 - 8: US tight crude output breakdown risen by 26 tb/d m-o-m to average 8.5 mb/d, according to the latest estimate from the US Energy Information Administration (EIA). This was 0.7 mb/d higher than in the same month last year.

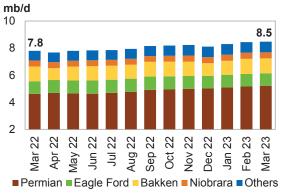
The m-o-m increase from shale and tight formations using horizontal wells came mainly from Permian shale production in Texas and New Mexico, where output rose by 62 tb/d to average 5.2 mb/d. This was up y-o-y by 607 tb/d.

In North Dakota, Bakken shale oil output fell by 32 tb/d m-o-m to average 1.1 mb/d, albeit still up by 4 tb/d y-o-y. Tight crude output at Eagle Ford in Texas dropped by a minor 4 tb/d to average 0.9 mb/d, which is down y-o-y by 11 tb/d. Production in Niobrara-Codell in Colorado and Wyoming was unchanged at an average of 0.4 mb/d.

Graph 5 - 7: US monthly crude oil and total liquids supply, m-o-m changes



■US total liquids production ■US crude oil production Sources: EIA and OPEC.



Sources: EIA and OPEC.

US liquids production in 2022, excluding processing gains, is estimated to have expanded y-o-y by 1.2 mb/d to average 19.2 mb/d. This is broadly unchanged from the previous assessment. Tight crude is assessed to have grown by 0.5 mb/d in 2022 to average 7.9 mb/d. In addition, NGLs (mainly from unconventional basins) are estimated to have grown by 0.5 mb/d to average 5.9 mb/d, and production in the GoM is estimated to have increased slightly by 36 tb/d. Non-conventional liquids and crude from conventional reservoirs are assessed to have expanded by 76 tb/d to average 1.4 mb/d and by 51 tb/d to average 2.3 mb/d, respectively.

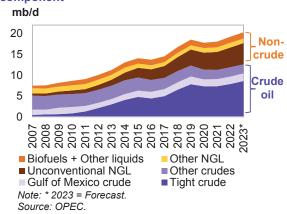
US crude oil and condensate production is estimated to grow by 0.6 mb/d y-o-y to average 11.9 mb/d in 2022.

gains, is forecast to expand y-o-y by 1.1 mb/d to component average 20.3 mb/d. This is up by 20 tb/d compared with the previous assessment. Higher-than-expected output in the 1Q23 was partially compensated by a lower forecast for the rest of the year. Better drilling activity and fewer supply chain/logistical issues in the prolific Permian, Eagle Ford and Bakken shale sites are still assumed for the remainder of 2023.

Given a sound level of oil field drilling and well completions, crude oil output is anticipated to increase by 0.7 mb/d y-o-y to average 12.6 mb/d.

Average tight crude output in 2023 is forecast at 8.6 mb/d, up y-o-y by 0.7 mb/d.

US liquids production in 2023, excluding processing Graph 5 - 9: US liquids supply developments by



At the same time, NGLs production and non-conventional liquids, particularly ethanol, are forecast to increase y-o-y by 0.3 mb/d and 40 tb/d, to average 6.2 mb/d and 1.5 mb/d, respectively.

The 2023 forecast assumes ongoing capital discipline, less inflationary pressure, as well as moderate supply chain issues and oil field service constraints (labour and equipment). Tightness in the hydraulic fracking and professional labour market is still expected to remain a challenge for US upstream producers this year.

Table 5 - 4: US liquids production breakdown, mb/d

		Change		Change		Change
US liquids	2021	2021/20	2022	2022/21	2023*	2023/22
Tight crude	7.34	0.00	7.89	0.55	8.60	0.71
Gulf of Mexico crude	1.71	0.04	1.74	0.04	1.83	0.09
Conventional crude oil	2.20	-0.11	2.25	0.05	2.16	-0.09
Total crude	11.25	-0.06	11.89	0.63	12.59	0.71
Unconventional NGLs	4.31	0.23	4.74	0.43	5.10	0.36
Conventional NGLs	1.12	0.02	1.14	0.02	1.09	-0.05
Total NGLs	5.42	0.25	5.88	0.46	6.19	0.30
Biofuels + Other liquids	1.36	0.10	1.44	0.08	1.48	0.04
US total supply	18.04	0.28	19.21	1.17	20.26	1.06

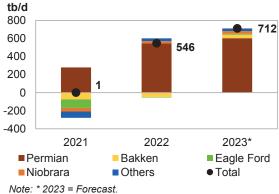
Note: * 2023 = Forecast. Sources: EIA, OPEC and Rystad Energy.

estimated to have increased y-o-y by 0.5 mb/d to y-o-y changes 4.7 mb/d. It is forecast to grow y-o-y by 0.6 mb/d to average 5.3 mb/d in 2023.

The **Bakken** shale production decline that occurred in 2020 and 2021 continued in 2022. Tight crude production in the Bakken is estimated to have dropped by 49 tb/d in 2022 to average 1.0 mb/d. This is much lower than the pre-pandemic average output of 1.4 mb/d.

In addition to several weather-related outages, drilling activity in **North Dakota** is expected to be lower than levels required to substantially recover output. In 2023, however, growth is forecast to resume, albeit at just 39 tb/d to average 1.1 mb/d.

US tight crude production in the Permian in 2022 is Graph 5 - 10: US tight crude output by shale play,



Sources: EIA and OPEC.

The **Eagle Ford** in Texas saw output of 1.2 mb/d in 2019, followed by declines in the period 2020 to 2022. It fell by an estimated 6 tb/d y-o-y to average 0.95 mb/d in 2022. Growth of around 10 tb/d is forecast for 2023, to average 0.96 mb/d.

Niobrara production is estimated to have grown y-o-y by 24 tb/d in 2022 to average 437 tb/d and is forecast to increase by 30 tb/d in 2023 to average 467 tb/d. Given current drilling and completion activities, other shale plays are expected to show marginal increases of 32 tb/d and 30 tb/d in 2022 and 2023, respectively.

Table 5 - 5: US tight oil production growth, mb/d

	Change			Change		Change
US tight oil	2021	2021/20	2022	2022/21	2023*	2023/22
Permian tight	4.19	0.28	4.74	0.55	5.34	0.60
Bakken shale	1.08	-0.07	1.03	-0.05	1.07	0.04
Eagle Ford shale	0.96	-0.09	0.95	-0.01	0.96	0.01
Niobrara shale	0.41	-0.04	0.44	0.02	0.47	0.03
Other tight plays	0.70	-0.07	0.73	0.03	0.76	0.03
Total	7.34	0.00	7.89	0.55	8.60	0.71

Note: * 2023 = Forecast. Source: OPEC.

US rig count, spudded, completed, DUC wells and fracking activity

Total active US drilling rigs in the week ending 2 June 2023 fell by 15 to 696, according to Baker Hughes. This was down by 31 rigs compared with a year ago. The number of active offshore rigs remained steady w-o-w at 20. This was higher by four compared with the same month a year earlier. Onshore oil and gas rigs were lower by 15 w-o-w to stand at 674 rigs, with two rigs in inland waters. This is down by 36 rigs y-o-y.

compared with 666 horizontal rigs a year ago. The output and WTI price number of drilling rigs for oil dropped by 15 w-o-w to US\$/b Rigs 555. However, gas-drilling rigs remained unchanged w-o-w at 137.

The Permian's rig count dropped by two w-o-w to 348 rigs. At the same time, rig counts dropped by two in Eagle Ford and Williston to 58 and 36, respectively. The rig count fell w-o-w by one in Cana Woodford to 21 and remained steady in DJ-Niobrara at 14.

One operating oil rig remained in the Barnett basin, down by one compared with the previous month, but unchanged w-o-w.

Drilling and completion (D&C) activities for Graph 5 - 12: Spudded, completed and started wells spudded, completed and started oil-producing wells in in US shale plays all US shale plays, based on EIA-DPR regions, Wells included 902 horizontal wells spudded in April (as per 1,200 preliminary data). This is down m-o-m by 57, and 1% higher than in April 2022.

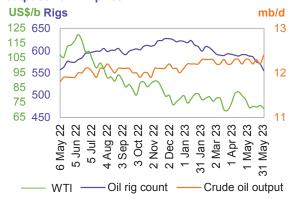
April preliminary data indicates a higher number of completed wells at 975, which is up y-o-y by 36%. The number of started wells was estimated at 898, which is 39% higher than a year earlier.

Preliminary data for May 2023 sees 626 spudded, 927 completed and 998 started wells, according to Rystad Energy.

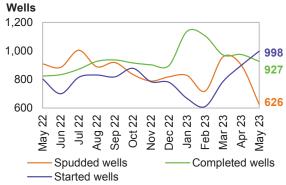
In terms of identified US oil and gas fracking operations by region, Rystad Energy reported that 1,207 wells were fracked in March 2023. In April and May, it stated that 1,101 and 1,100 wells began fracking, respectively. Preliminary numbers are based on analysis of high-frequency satellite data.

Preliminary April data showed that 276 and 268 wells were fracked in the Permian Midland and Permian Delaware, respectively. Compared with March, there was a decline of 4 wells in the Delaware and a jump of 10 in the Midland. Data also indicated that 56 wells were fracked in the DJ Basin, 100 in Eagle Ford and 110 in Bakken.

The US horizontal rig count fell w-o-w by 14 to 628, Graph 5 - 11: US weekly rig count vs. US crude oil



Sources: Baker Hughes, EIA and OPEC.



Note: Apr 23-May 23 = Preliminary data. Sources: Rystad Energy and OPEC.

Graph 5 - 13: Fracked wells count per month



Note: Apr 23-May 23 = Preliminary data. Sources: Rystad Energy Shale Well Cube and OPEC.

1.81

Canada

Canada's liquids production in April is estimated to Graph 5 - 14: Canada's monthly liquids production have dropped m-o-m by 327 tb/d to average 5.4 mb/d. development by type This is the lowest output seen since May 2022.

Conventional crude production increased m-o-m in April by 9 tb/d to average 1.3 mb/d, while NGLs output decreased marginally by 7 tb/d to average 1.2 mb/d. Crude bitumen production output fell m-o-m by 162 tb/d, and synthetic crude declined m-o-m by 167 tb/d. Taken together, crude bitumen and synthetic crude production decreased by 329 tb/d to 2.9 mb/d.

1.6 1.4 1.27 1.2 1.17 1.12 0.8 22 22 22 22 22 23 23 23 22 22 Aug ; Sep ; Dec Мау Jun oct % No No Jan Apr E

Synthetic crude Bitumen Sources: Statistics Canada, Alberta Energy Regulator and

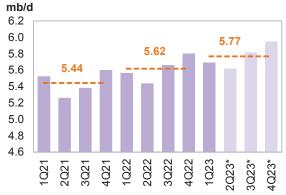
Conventional crude

expanded by 0.2 mb/d to average 5.6 mb/d, broadly and forecast unchanged from the previous assessment. Oil sands output, mainly from Alberta, saw growth of 60 tb/d y-o-y to average 3.2 mb/d in 2022.

Canada's production in 1Q23, was lower-thanexpected and under pressure due to freezing weather and lower bitumen production.

For 2023, Canada's liquids production is forecast to increase at a pace roughly similar to 2022, rising by 0.2 mb/d to average 5.8 mb/d. This is down by 15 tb/d compared with the previous assessment due to a data revision in 1Q23 from the Alberta Energy Regulator. Incremental production in the following months is expected to come through oil sand project ramp-ups and debottlenecks, alongside conventional growth.

Canada's liquids supply in 2022 is estimated to have Graph 5 - 15: Canada's quarterly liquids production



Note: * 2Q23-4Q23 = Forecast, Source: OPEC.

Scheduled maintenance programmes during 2Q23 and 3Q23 are expected to soften output, however, oil sands are projected to be the main driver of Canada's production through to the end of the year, driven by Kearl debottlenecking and CNRL Horizon optimization. Additionally, the Terra Nova Floating Production Storage and Offloading unit (FPSO) is expected to restart production in mid-2023. Declines in liquid production are expected in May due to the wildfire season especially in western Canada, however, the effect is expected to be minor on an annualized basis.

mb/d 2.2

2.0

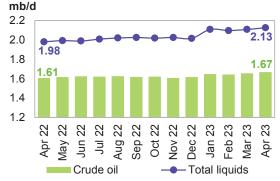
1.8

OPEC.

Mexico

Mexico's crude output increased m-o-m by 12 tb/d Graph 5 - 16: Mexico's monthly liquids and in April to average 1.7 mb/d, and NGLs output rose crude production development by 6 tb/d. Mexico's total April liquids output m-o-m rose by 18 tb/d to an average of 2.1 mb/d, according to the Comisión Nacional de Hidrocarburos (CNH). This was higher than expected, mainly due to the persistent ramp-up of Pemex's priority fields.

For 2022, Mexico's liquids production is estimated to have averaged 2.0 mb/d, broadly unchanged from the previous month's assessment. Growth of 50 tb/d is estimated for 2022.



Sources: Mexico Comision Nacional de Hidrocarburos (CNH) and OPEC

For 2023, liquids production is now forecast to rise by 59 tb/d to average 2.1 mb/d. This is up by 9 tb/d from the previous assessment, due to higher liquid output in April and improved expectations for the rest of the year.

In its latest investor presentation, Pemex highlighted the importance of its priority fields (mainly condensate and light crude) to achieve its production goal. In April, Pemex's strategy in focusing on onshore and shallowwater developments resulted in Mexico's highest production since May 2018, and this strategy could continue to support production over the short term. However, it is expected that declines from mature fields could start offsetting monthly gains from new fields once again in 2H23.

OECD Europe

Norway

broadly unchanged m-o-m at to average 2.1 mb/d, in development line with Johan Sverdrup phase-2 ramp-up expectations.

Norway's crude production declined by 24 tb/d m-o-m in April to average 1.8 mb/d, albeit higher by 144 tb/d y-o-y. Monthly oil production was 0.5% lower than the Norwegian Petroleum Directorate's (NPD) forecast.

Production of NGLs and condensates, however, rose by 20 tb/d m-o-m to average 0.2 mb/d, according to NPD data.

For 2022, production in the Norwegian Continental Shelf is estimated to have declined by around 140 tb/d y-o-y to average 1.9 mb/d, reflecting some poor performance in Norwegian fields.

Norwegian liquids production in April remained Graph 5 - 17: Norway's monthly liquids production



Sources: The Norwegian Petroleum Directorate (NPD) and

For 2023, Norwegian liquids production is forecast to expand by 0.2 mb/d, unchanged compared with last month's forecast, to average 2.1 mb/d.

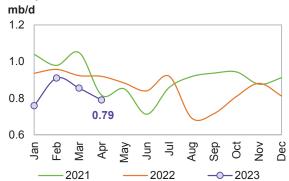
A number of small-to-large projects are scheduled to begin in 2023. The Johan Sverdrup ramp-up is projected to be the main source of growth following its phase 2 start-up in December 2022. Norway's Equinor stated in May 2023 that is planned to maintain Johan Sverdrup output at a higher level close to 755 tb/d after a successful testing of the facilities. At the same time, Neptune Energy announced the start-up of its Fenja field, which is expected to produce around 35 tboe/d. Fenja is tied back to the Equinor-operated Njord complex, which resumed operations in December 2022.

UK

In April, UK liquids production fell m-o-m by 65 tb/d Graph 5 - 18: UK monthly liquids production to average 0.8 mb/d. Crude oil output dropped by 68 development tb/d m-o-m to average 0.7 mb/d, which was lower by 123 tb/d y-o-y, according to official data. NGLs output remained broadly unchanged to average 87 tb/d. UK liquids output in April was down 14% compared to April 2023, mainly due to natural declines and outages.

For 2022, UK liquids production is estimated to have dropped by 51 tb/d to average 0.9 mb/d. This is broadly unchanged from the previous assessment.

For 2023, UK liquids production is forecast to increase by 20 tb/d to average 0.9 mb/d, down by a minor 8 tb/d from the previous assessment due to lower-than-expected April 2023 output.

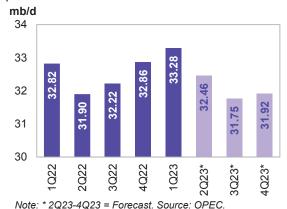


Sources: UK Department for Business, Energy and Industrial Strategy and OPEC.

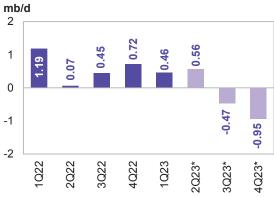
A number of new fields, including Seagull, the Penguins Redevelopment, Captain EOR and Saturn Banks phase 1 will help offset base declines in 2023. However, project sanctioning will be essential to maintain future oil and gas output, as UK production has been in long-term decline. Shell UK Ltd completed restart operations at Pierce field in the UK Central North Sea following an upgrade to allow gas to be produced after years of producing only oil. Gross peak production is expected to reach 30 tboe/d, more than twice the production prior to redevelopment, with more gas being produced than oil.

Non-OECD

Graph 5 - 19: Non-OECD quarterly liquids production and forecast



Graph 5 - 20: Non-OECD quarterly liquids supply, y-o-y changes

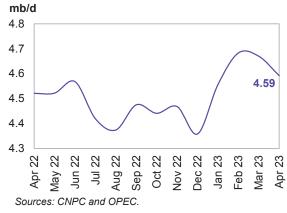


Note: * 2Q23-4Q23 = Forecast. Source: OPEC.

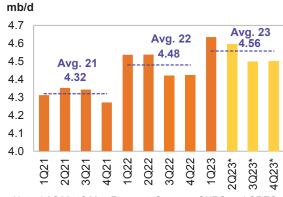
China

China's liquids production fell m-o-m in **April** by 78 tb/d to average 4.6 mb/d, which is up by 71 tb/d y-o-y, according to official data. Crude oil output in April averaged 4.2 mb/d, down by 78 tb/d compared with the previous month, but higher y-o-y by 68 tb/d. NGLs and condensate production was largely stable m-o-m, averaging 48 tb/d.

Graph 5 - 21: China's monthly liquids production development



Graph 5 - 22: China's quarterly liquids production and forecast



Note: * 2Q23-4Q23 = Forecast. Sources: CNPC and OPEC.

For **2022**, growth of 160 tb/d is estimated with production averaging 4.5 mb/d. This is unchanged from the previous assessment and higher by 3.6% y-o-y.

For **2023**, y-o-y growth of about 78 tb/d is forecast for an average of 4.6 m/d, roughly unchanged from last month's assessment. Natural decline rates are expected to be offset by additional growth through more infill wells and enhanced oil recovery (EOR) projects amid efforts by state-owned oil companies to safeguard their energy supply.

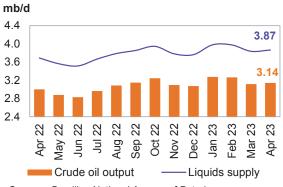
New offshore discoveries, the development of remote onshore basins and more investment in advanced EOR projects are expected to offset declining output in mature fields. Upstream investment is expected to remain structurally elevated, considering initial 2023 capex announcements by Chinese major oil and gas companies, as well as their seven-year action plan that began in 2019 and focuses on domestic upstream production growth.

Latin America

Brazil

Brazil's crude output in April rose m-o-m by 26 tb/d to average 3.1 mb/d, mainly due to a post-salt production recovery. However, NGLs production was broadly unchanged at an average 80 tb/d and it is expected to remain flat in May. Biofuels output (mainly ethanol) was largely unchanged, m-o-m, at an average of 644 tb/d. with preliminary data showing a steady trend in May. The country's total liquids production increased by 29 tb/d in April to average 3.9 mb/d. This is slightly lower than the highest production rate on record in January 2023, due to maintenance in some pre-salt fields.

Graph 5 - 23: Brazil's monthly liquids production development by type



Sources: Brazilian National Agency of Petroleum,

Natural Gas and Biofuels (ANP) and OPEC.

Graph 5 - 24: Brazil's quarterly liquids production



Note: * 2Q23-4Q23 = Forecast. Sources: ANP and OPEC.

For 2022, Brazil's liquids supply, including biofuels, is estimated to have increased y-o-y by 0.1 mb/d to average 3.7 mb/d, primarily unchanged from the previous assessment.

For 2023, Brazil's liquids supply, including biofuels, is forecast to rise y-o-y by 0.2 mb/d to average 4.0 mb/d, unchanged from the previous forecast.

Crude oil output is set to increase through production ramp-ups in the Buzios (Franco), Mero (Libra NW), Tupi (Lula), Peregrino, Sepia, Marlim and Itapu (Florim) fields. However, offshore maintenance is expected to cause some interruptions in major fields. Petrobras has also started production at the fifth FPSO in the giant Buzios field in the deepwater pre-salt Santos Basin offshore Brazil, according to Offshore Magazine; the Almirante Barroso platform has capacity to produce up to 150 tb/d of oil and 6 million cm/d of gas and inject 220 tb/d of water.

Russia

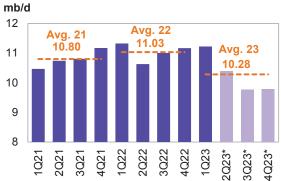
Russia's liquids production in April fell m-o-m by 176 tb/d to average 10.9 mb/d. This includes 9.6 mb/d of crude oil and 1.4 mb/d of NGLs and condensate.

Graph 5 - 25: Russia's monthly liquids production mb/d



Sources: Nefte Compass and OPEC

Graph 5 - 26: Russia's quarterly liquids production



Note: * 2Q23-4Q23 = Forecast Sources: Nefte Compass and OPEC.

Russian liquids output in 2022 is estimated to have increased y-o-y by 0.2 mb/d to average 11.0 mb/d. This is broadly unchanged from the previous month's assessment.

For 2023, Russian liquids production is forecast to drop by 0.75 mb/d to average 10.28 mb/d, unchanged from the previous month's assessment. It is worth noting that the expected contraction takes into account recently announced voluntary production adjustments to the end of 2023.

Caspian

Kazakhstan & Azerbaijan

Liquids output in Kazakhstan increased by a minor 6 tb/d m-o-m to average 2.0 mb/d in April. Crude production was up by 20 tb/d m-o-m to average 1.6 mb/d, while NGLs and condensate output declined by 14 tb/d m-o-m to average 0.4 mb/d.

Kazakhstan's liquids supply for 2022 is forecast to have declined y-o-y by 44 tb/d to average 1.8 mb/d. This is broadly unchanged compared with the previous month's assessment.

For 2023, liquids supply is forecast to increase by 0.1 mb/d, up by a minor 9 tb/d compared with the previous forecast due to better-than-expexted production in April.

Azerbaijan's liquids production in April remained Graph 5 - 27: Caspian monthly liquids production broadly stable m-o-m, averaging 0.7 mb/d, which is a development by selected country drop of 65 tb/d y-o-y. Crude production averaged 512 tb/d, with NGLs output at 146 tb/d, according to official sources.

For **2022**. liquids supply in Azerbaijan is estimated to have declined y-o-y by 40 tb/d to average 0.7 mb/d.

Azerbaijan's liquids supply for 2023 is forecast to rise by 29 tb/d to average 0.7 mb/d. This is a downward revision of a minor 8 tb/d, due to lower-than-expected production in major oil fields in April. The main declines in legacy reservoirs, like Azeri-Chirag-Guneshli (ACG) oil fields, are expected to be offset by ramp-ups in other fields. Growth is forecast to come mainly from the Shah Deniz and Absheron gas condensate projects.



Sources: Nefte Compass, JODI and OPEC.

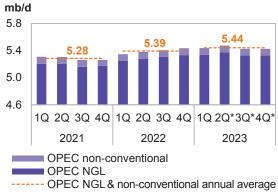
OPEC NGLs and non-conventional oils

are estimated to have grown by 0.1 mb/d to average liquids quarterly production and forecast 5.4 mb/d, unchanged from the previous assessment.

NGLs output in 1Q23 is expected to have averaged 5.34 mb/d, while OPEC non-conventional output remained steady at 0.1 mb/d. Taken together, 5.46 mb/d is expected for April, according to preliminary data.

OPEC NGLs and non-conventional liquids are forecast to expand by around 50 tb/d in 2023 to average 5.4 mb/d. NGLs production is projected to grow by 50 tb/d to average 5.3 mb/d, while non-conventional liquids are projected to remain unchanged at 0.1 mb/d.

OPEC NGLs and non-conventional liquids in 2022 Graph 5 - 28: OPEC NGLs and non-conventional



Note: * 2Q23-4Q23 = Forecast. Source: OPEC.

Table 5 - 6: OPEC NGL + non-conventional oils, mb/d

OPEC NGL and	Change		(Change					(Change
non-coventional oils	2021	21/20	2022	22/21	1Q23	2Q23	3Q23	4Q23	2023	23/22
OPEC NGL	5.18	0.12	5.29	0.11	5.34	5.37	5.33	5.33	5.34	0.05
OPEC non-conventional	0.10	0.00	0.10	0.00	0.10	0.10	0.10	0.10	0.10	0.00
Total	5.28	0.12	5.39	0.11	5.44	5.47	5.43	5.43	5.44	0.05

Note: 2023 = Forecast. Source: OPEC.

OPEC crude oil production

According to secondary sources, total **OPEC-13 crude oil production** averaged 28.06 mb/d in May 2023, lower by 464 tb/d m-o-m. Crude oil output increased mainly in Nigeria, IR Iran and Angola, while production in Saudi Arabia, the UAE and Kuwait declined.

Table 5 - 7: OPEC crude oil production based on secondary sources, tb/d

Secondary									Change
sources	2021	2022	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	May/Apr
Algeria	913	1,017	1,040	1,030	1,015	1,012	1,010	974	-36
Angola	1,122	1,140	1,155	1,084	1,063	978	1,091	1,145	54
Congo	263	261	264	252	270	273	261	265	4
Equatorial Guinea	98	84	90	63	53	46	60	56	-3
Gabon	182	197	201	199	194	197	209	210	1
IR Iran	2,392	2,554	2,565	2,567	2,568	2,577	2,619	2,679	61
Iraq	4,046	4,439	4,522	4,505	4,372	4,339	4,115	4,137	22
Kuwait	2,419	2,704	2,801	2,712	2,684	2,680	2,650	2,555	-95
Libya	1,143	981	976	1,153	1,157	1,159	1,160	1,169	8
Nigeria	1,372	1,204	1,063	1,172	1,345	1,357	1,098	1,269	171
Saudi Arabia	9,114	10,530	10,893	10,605	10,358	10,411	10,496	9,977	-519
UAE	2,727	3,066	3,168	3,094	3,044	3,041	3,034	2,894	-140
Venezuela	553	673	657	662	696	703	726	735	9
Total OPEC	26,345	28,852	29,397	29,097	28,820	28,773	28,529	28,065	-464

Notes: Totals may not add up due to independent rounding, given available secondary sources to date. Source: OPEC.

Table 5 - 8: OPEC crude oil production based on direct communication, tb/d

									Change
Direct communication	2021	2022	3Q22	4Q22	1Q23	Mar 23	Apr 23	May 23	May/Apr
Algeria	911	1,020	1,050	1,030	1,011	1,008	999	962	-37
Angola	1,124	1,137	1,147	1,071	1,046	972	1,063	1,111	48
Congo	267	262	261	261	278	285	277	285	9
Equatorial Guinea	93	81	83	56	51	48	49	61	12
Gabon	181	191	198	183	201	190	197		
IR Iran									
Iraq	3,971	4,453	4,632	4,505	4,288	4,200	3,938	3,955	17
Kuwait	2,415	2,707	2,799	2,721	2,676	2,676	2,676	2,548	-128
Libya	1,207						1,210	1,158	-52
Nigeria	1,323	1,138	985	1,137	1,277	1,268	999	1,184	185
Saudi Arabia	9,125	10,591	10,968	10,622	10,456	10,464	10,461	9,959	-502
UAE	2,718	3,064	3,170	3,093	3,041	3,045	3,041	2,891	-150
Venezuela	636	716	673	693	731	754	810	819	9
Total OPEC									

Notes: .. Not available. Totals may not add up due to independent rounding. Source: OPEC.

Commercial Stock Movements

Preliminary April 2023 data sees total OECD commercial oil stocks up m-o-m by 30.2 mb. At 2,808 mb, they were 144 mb higher than the same time one year ago, but 74 mb lower than the latest five-year average and 119 mb below the 2015–2019 average. Within the components, crude stocks fell by 0.5 mb, while product stocks rose m-o-m by 30.6 mb.

OECD commercial crude stocks stood at 1,384 mb in April. This was 77 mb higher than the same time a year ago, but 42 mb below the latest five-year average and 88 mb lower than the 2015–2019 average. Total product inventories stood at 1,424 mb, representing a surplus of 66 mb above the same time a year ago, but 32 mb lower than the latest five-year average and 30 mb below the 2015-2019 average.

In terms of days of forward cover, OECD commercial stocks fell m-o-m by 0.1 days in April to stand at 60.9 days. This is 2.9 days above the April 2022 level, but 3.3 days lower than the latest five-year average and 1.3 days less than the 2015-2019 average.

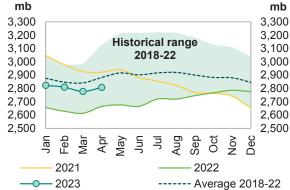
Preliminary data for May 2023 showed that total US commercial oil stocks rose m-o-m by 21.5 mb to stand at 1,256 mb. This is 83.3 mb, or 7.1%, higher than the same month in 2022, but 29.4 mb, or 2.3%, below the latest five-year average. Crude stocks fell by 0.4 mb, while product stocks rose by 21.9 mb.

OECD

Preliminary April 2023 data sees total OECD Graph 9 - 1: OECD commercial oil stocks commercial oil stocks up m-o-m by 30.2 mb. At 2,808 mb, they were 144 mb higher than the same 3,300 time one year ago, but 74 mb lower than the latest five-year average and 119 mb below the 2015–2019 average.

Within the components, crude stocks fell by 0.5 mb, while product stocks rose m-o-m by 30.6 mb. Within OECD regions, total commercial oil stocks in April increased in all regions.

OECD commercial **crude stocks** stood at 1,384 mb in April. This was 77 mb higher than the same time a year ago, but 42 mb below the latest five-vear average and 88 mb lower than the 2015-2019 average.



Sources: Argus. EIA. Euroilstock. IEA. METI and OPEC.

M-o-m, OECD Americas and OECD Europe saw crude stock draws of 5.8 mb and 2.6 mb, respectively, while stocks in OECD Asia-Pacific rose by 7.9 mb.

Total product inventories rose by 30.6 mb in April to stand at 1,424 mb. This is 66 mb above the same time a year ago, but 32 mb lower than the latest five-year average and 30 mb below the 2015–2019 average. M-o-m, product stocks in OECD Americas, OECD Asia Pacific and OECD Europe witnessed a product stock build of 21.5 mb, 5.1 mb and 4.0 mb, respectively.

Table 9 - 1: OECD commercial stocks, mb

					Change
OECD stocks	Apr 22	Feb 23	Mar 23	Apr 23	Apr 23/Mar 23
Crude oil	1,306	1,377	1,384	1,384	-0.5
Products	1,358	1,433	1,393	1,424	30.6
Total	2,664	2,809	2,778	2,808	30.2
Days of forward cover	58.0	61.7	61.0	60.9	-0.1

Note: Totals may not add up due to independent rounding. Sources: Argus, EIA, Euroilstock, IEA, METI and OPEC.

In terms of days of forward cover, OECD commercial stocks fell m-o-m by 0.1 days in April to stand at 60.9 days. This is 2.9 days above the April 2022 level, but 3.3 days lower than the latest five-year average and 1.3 days less than the 2015–2019 average.

Within OECD regions, OECD Americas and OECD Europe were 3.8 days and 4.6 days below the latest fiveyear average to stand at 59.0 days and 69.0 days respectively, while they were at 52.1 days in OECD Asia-Pacific, 0.6 days above the latest five-year average.

OECD Americas

OECD Americas' total commercial stocks rose by 15.7 mb m-o-m in April to settle at 1,500 mb. This is 89 mb higher than the same month in 2022, but 26 mb bellow the latest five-year average.

Commercial crude oil stocks in OECD Americas dropped m-o-m by 5.8 mb in April to stand at 764 mb, which is 34 mb higher than in April 2022, but 23 mb bellow the latest five-year average. The monthly drop in crude oil stocks can be attributed to higher US crude runs, which increased by around 300 tb/d to 16.37 mb/d.

By contrast, total product stocks in OECD Americas rose m-o-m, increasing by 21.5 mb in April to stand at 737 mb. This is 56 mb higher than the same month in 2022, but 2.8 mb below the latest five-year average. Lower consumption in the region was behind the product stock build.

OECD Europe

OECD Europe's total commercial stocks rose m-o-m by 1.5 mb in April to settle at 939 mb. This is 20 mb higher than the same month in 2022, but 47 mb below the latest five-year average.

OECD Europe's commercial crude stocks fell m-o-m by 2.6 mb to end April at 418 mb. This is 14 mb higher than one year ago, but 18 mb below the latest five-year average. The fall in crude oil inventories came on the back of higher refinery throughput in the EU-14, plus the UK and Norway increasing m-o-m by around 540 tb/d to stand at 9.64 mb/d.

By contrast, Europe's product stocks rose m-o-m by 4.0 mb to end April at 522 mb. This is 6.2 mb higher than a year ago at the same time, but 29 mb below the latest five-year average.

OECD Asia Pacific

OECD Asia Pacific's total commercial oil stocks rose m-o-m by 13.0 mb in April to stand at 368 mb. This is 34 mb higher than the same time a year ago, but 0.7 mb below the latest five-year average.

OECD Asia Pacific's crude inventories rose m-o-m by 7.9 mb to end April at 203 mb. This is 30 mb higher than one year ago, but 0.6 mb below the latest five-year average.

OECD Asia Pacific's product inventories also rose by 5.1 mb m-o-m to end April at 166 mb. This is 4.4 mb higher than one year ago, but 0.2 mb below the latest five-year average.

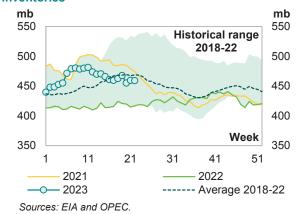
US

commercial oil stocks rose m-o-m by 21.5 mb to inventories stand at 1,256 mb. This is 83.3 mb, or 7.1%, higher than the same month in 2022, but 29.4 mb, or 2.3%, below the latest five-year average. Crude stocks fell by 0.4 mb, while product stocks rose by 21.9 mb.

US commercial crude stocks in May stood at 459.2 mb. This is 44.9 mb, or 10.8%, higher than the same month of 2022, but 6.4 mb, or 1.4%, less than the latest five-year average. The monthly drop in crude oil stocks can be attributed to higher crude runs, which increased by around 240 tb/d to 16.61 mb/d.

By contrast, total product stocks rose in May to stand at 796.5 mb. This is 38.3 mb, or 5.1%, higher than May 2022 levels, but 23.0 mb, or 2.8%, lower than the latest five-year average. The product stock build could be attributed to lower product consumption.

Preliminary data for May 2023 showed that total US Graph 9 - 2: US weekly commercial crude oil

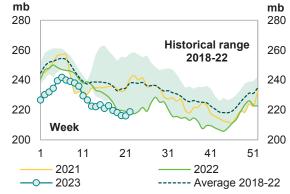


Gasoline stocks fell m-o-m by 4.1 mb in May to settle Graph 9 - 3: US weekly gasoline inventories at 218.8 mb. This is 1.9 mb, or 0.9%, higher than the same month of 2022; but 20.9 mb, or 8.7%, below the latest five-year average.

By contrast, distillate stocks rose m-o-m, increasing by 1.4 mb in May to stand at 218.8 mb. This is 2.2 mb. or 2.0%, higher than the same month of 2022, but 22.5 mb, or 16.8%, below the latest five-year average.

Residual fuel oil stocks also rose m-o-m by 0.4 mb in May. At 32.7 mb, this was 3.5 mb, or 12.1%, higher than a year earlier, and 0.4 mb, or 1.2%, above the latest five-year average

Jet fuel stocks rose m-o-m by 0.7 mb, ending May at 42.3 mb. This is 0.9 mb. or 2.2%, higher than the same month in 2022 and 1.1 mb, or 2.7%, above the latest five-year average.



Sources: EIA and OPEC.

Table 9 - 2: US commercial petroleum stocks, mb

					Change
US stocks	May 22	Mar 23	Apr 23	May 23	May 23/Apr 23
Crude oil	414.3	465.4	459.6	459.2	-0.4
Gasoline	220.7	225.3	222.9	218.8	-4.1
Distillate fuel	109.5	112.3	110.3	111.7	1.4
Residual fuel oil	29.2	29.6	32.3	32.7	0.4
Jet fuel	41.4	37.7	41.6	42.3	0.7
Total products	758.2	765.4	774.6	796.5	21.9
Total	1,172.5	1,230.8	1,234.3	1,255.7	21.5
SPR	523.1	371.2	364.9	353.6	-11.4

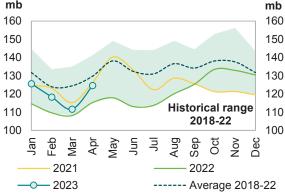
Sources: EIA and OPEC.

Japan

In Japan, total commercial oil stocks in April Graph 9 - 4: Japan's commercial oil stocks rose m-o-m by 13.0 mb to settle at 124.7 mb. This is 9.4 mb, or 8.2%, higher than the same month in 2022, but 5.1 mb, or 3.9%, below the latest five-year average. Crude and product stocks rose m-o-m by 7.9 mb and 5.1 mb, respectively.

Japanese commercial crude oil stocks rose m-o-m by 7.9 mb in April to stand at 70.0 mb. This is 5.2 mb, or 8.0%, higher than the same month of 2022, but 3.7 mb, or 5.1%, lower than the latest five-year average. This crude stock build came on the back of higher crude imports, which increased m-o-m by 364 tb/d, or 14.5%, to stand at 2.87 mb/d.

mb



Sources: METI and OPEC.

Gasoline stocks rose m-o-m by 0.4 mb to stand at 10.5 mb in April. This was 0.1 mb, or 0.9%, above a year earlier, but 1.0 mb, or 8.6%, lower than the latest five-year average. The build came on the back of lower domestic sales, which decreased by 1.9% m-o-m.

Distillate stocks also rose m-o-m by 2.8 mb to end April at 22.1 mb. This is 1.8 mb, or 8.8%, above the same month of 2022, but 1.1 mb, or 4.5%, below the latest five-year average. Within distillate components, jet fuel, kerosene and gasoil stocks increased by 19.3%, 4.0% and 23.1%, respectively.

Total residual fuel oil stocks rose m-o-m by 0.1 mb to end April at 11.5 mb. This is 0.5 mb, or 4.9%, higher than in the same month of 2022, but 0.8 mb, or 6.4%, below the latest five-year average. Within the components, fuel oil A stocks dropped m-o-m by 2.6% while fuel oil B.C stocks rose by 2.6%.

Table 9 - 3: Japan's commercial oil stocks*, mb

					Change
Japan's stocks	Apr 22	Feb 23	Mar 23	Apr 23	Apr 23/Mar 23
Crude oil	64.8	65.7	62.0	70.0	7.9
Gasoline	10.4	10.5	10.0	10.5	0.4
Naphtha	8.8	9.2	8.9	10.7	1.8
Middle distillates	20.3	21.3	19.3	22.1	2.8
Residual fuel oil	11.0	11.5	11.4	11.5	0.1
Total products	50.4	52.6	49.6	54.7	5.1
Total**	115.2	118.3	111.7	124.7	13.0

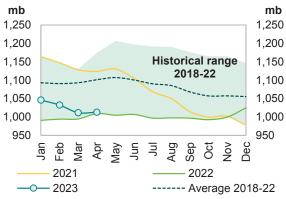
Note: * At the end of the month. ** Includes crude oil and main products only.

Sources: METI and OPEC.

EU-14 plus UK and Norway

Preliminary data for April showed that total Graph 9 - 5: EU-14 plus UK and Norway total oil European commercial oil stocks rose m-o-m by stocks 1.5 mb to stand at 1,012.8 mb. At this level, they were 3.7 mb, or 0.4%, above the same month of 2022, but 88.2 mb, or 8.0%, lower than the latest five-year average. Crude stocks fell m-o-m by 2.6 mb, while product stocks rose by 4.0 mb.

European crude inventories fell in April to stand at 431.3 mb. This is 3.8 mb, or 0.9%, higher than the same month in 2022, but 43.0 mb, or 9.1%, below the latest five-year average. The fall in crude oil inventories came on the back of higher refinery throughput in the EU-14, plus the UK and Norway increasing m-o-m by around 540 tb/d to stand at 9.64 mb/d.



Sources: Argus, Euroilstock and OPEC.

By contrast, total European product stocks rose by 4.0 mb m-o-m to end April at 581.4 mb. This is 0.1 mb lower than the same month of 2022, and 45.2 mb, or 7.2%, below the latest five-year average.

Gasoline stocks rose m-o-m by 1.5 mb in April to stand at 110.8 mb. At this level, they were 3.7 mb, or 3.2%, lower than the same time in 2022 and 6.4 mb, or 5.5%, below the latest five-year average.

Middle distillate stocks also rose m-o-m by 2.2 mb in April to stand at 378.9 mb. This is 7.0 mb, or 1.9%, higher the same month in 2022, but 34.5 mb, or 8.4%, lower than the latest five-year average.

Residual fuel stocks increased m-o-m by 0.3 mb in April to stand at 61.2 mb. This is 1.3 mb, or 2.1%, lower than the same month in 2022, and 3.9 mb, or 6.0%, below the latest five-year average.

Naphtha stocks rose m-o-m by 0.1 mb in April, ending the month at 30.5 mb. This is 2.1 mb, or 6.5%, lower than the April 2022 level, and 0.4 mb, or 1.2%, below the latest five-year average.

Table 9 - 4: EU-14 plus UK and Norway's total oil stocks, mb

					Change
EU stocks	Apr 22	Feb 23	Mar 23	Apr 23	Apr 23/Mar 23
Crude oil	427.6	425.8	433.9	431.3	-2.6
Gasoline	114.4	112.6	109.3	110.8	1.5
Naphtha	32.7	28.9	30.5	30.5	0.1
Middle distillates	371.9	403.9	376.7	378.9	2.2
Fuel oils	62.6	61.1	60.9	61.2	0.3
Total products	581.5	606.5	577.4	581.4	4.0
Total	1,009.1	1,032.3	1,011.3	1,012.8	1.5

Sources: Argus, Euroilstock and OPEC.

Singapore, Amsterdam-Rotterdam-Antwerp (ARA) and Fujairah

Singapore

In **April**, **total product stocks in Singapore** fell m-o-m by 2.1 mb to reach 45.9 mb. This is 5.6 mb, or 13.9%, higher than the same month in 2022, but 0.1 mb, or 0.3%, below the latest five-year average.

Light distillate stocks fell m-o-m by 0.3 mb in April to stand at 15.2 mb. This is 1.3 mb, or 9.1%, higher than the same month of 2022 and 1.6 mb, or 11.4 %, above the latest five-year average.

Middle distillate stocks also dropped m-o-m by 1.6 mb in April to stand at 8.0 mb. This is 1.4 mb, or 20.9%, higher than a year earlier, but 2.6 mb, or 24.7%, lower than the latest five-year average.

Residual fuel oil stocks fell m-o-m by 0.2 mb, ending April at 22.7 mb. This is 3.0 mb, or 15.0%, higher than April 2022, but 0.1 mb, or 0.3%, less than the latest five-year average.

ARA

Total product stocks in ARA fell m-o-m by 1.2 mb in **April**. At 45.3 mb, they were 6.6 mb, or 17.0%, higher than the same month in 2022 and 2.2 mb, or 5.1%, higher than the latest five-year average.

Gasoline stocks in April fell by 1.4 mb m-o-m to stand at 11.0 mb. This is 0.6 mb, or 4.9%, lower than the same month of 2022 and 0.6 mb, or 4.9%, less than the latest five-year average.

Gasoil stocks also fell by 0.9 mb m-o-m, ending April at 16.7 mb. This is 5.4 mb, or 48.4%, higher than April 2022 and 0.4 mb, or 2.7%, above the latest five-year average.

By contrast, jet oil stocks rose by 0.7 mb m-o-m to stand at 7.2 mb. This is 0.5 mb, or 8.0%, higher than levels of April 2022 and higher by 6.1 mb, or 1.1 %, when compared with the latest five-year average.

Meantime, **fuel oil stocks** also remained unchanged m-o-m in April to stand at 8.0 mb, which is 1.5 mb, or 24.0%, higher than in April 2022 and 0.1 mb, or 1.4%, higher than the latest five-year average.

Fujairah

During the week ending 5 June 2023, **total oil product stocks in Fujairah** rose w-o-w by 1.11 mb to stand at 24.32 mb, according to data from Fed Com and S&P Global Commodity Insights. At this level, total oil stocks were 4.13 mb higher than at the same time a year ago.

Light distillate stocks rose w-o-w by 0.59 mb to stand at 7.88 mb, which is 0.46 mb higher than a year ago.

Middle distillate stocks also rose w-o-w by 0.43 mb to stand at 4.36 mb, which is 1.94 mb higher than the same time last year.

Heavy distillate stocks rose by 0.09 mb w-o-w to stand at 12.09 mb, which is 1.72 mb lower than the same period a year ago at the same time.

Balance of Supply and Demand

Demand for OPEC crude in 2022 remained unchanged from the previous MOMR at 28.4 mb/d. This is around 0.5 mb/d higher than in 2021.

According to secondary sources, OPEC crude production averaged 28.3 mb/d in 1Q22, which is 0.3 mb/d lower than the demand for OPEC crude. In 2Q22, OPEC crude production averaged 28.6 mb/d, which is 0.4 mb/d higher than the demand for OPEC crude. In 3Q22, OPEC crude production averaged 29.4 mb/d, which is 1.1 mb/d higher than the demand for OPEC crude. In 4Q22, OPEC crude production averaged 29.1 mb/d, which is 0.4 mb/d higher than the demand for OPEC crude. For the whole year 2022, OPEC crude oil production averaged 28.9 mb/d, which is 0.4 mb/d higher than the demand for OPEC crude.

Demand for OPEC crude in 2023 remained unchanged from the previous assessment to stand at 29.3 mb/d. This is around 0.9 mb/d higher than in 2022.

According to secondary sources, OPEC crude production averaged 28.8 mb/d in 1Q23, which is 0.5 mb/d higher than the demand for OPEC crude.

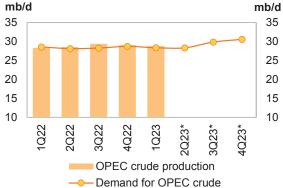
Balance of supply and demand in 2022

Demand for OPEC crude in 2022 remained Graph 10 - 1: Balance of supply and demand, unchanged from the previous MOMR at 28.4 mb/d. 2022-2023* This is around 0.5 mb/d higher than in 2021.

Compared with the previous assessment, all the quarters remained unchanged.

Compared with the same quarters in 2021, demand for OPEC crude in 1Q22 and 2Q22 was estimated to be higher by 2.4 mb/d and 1.3 mb/d, respectively, while 3Q22 and 4Q22 are estimated to be lower by 0.3 mb/d and 1.3 mb/d, respectively.

According to secondary sources, OPEC crude production averaged 28.3 mb/d in 1Q22, which is 0.3 mb/d lower than the demand for OPEC crude.



Note: * 2Q23-4Q23 = Forecast. Source: OPEC.

In 2Q22, OPEC crude production averaged 28.6 mb/d, which is 0.4 mb/d higher than the demand for OPEC crude. In 3Q22, OPEC crude production averaged 29.4 mb/d, which is 1.1 mb/d higher than the demand for OPEC crude. In 4Q22, OPEC crude oil production averaged 29.1 mb/d, which is 0.4 mb/d higher than the demand for OPEC crude.

For the whole year 2022, OPEC crude oil production averaged 28.9 mb/d, which is 0.4 mb/d higher than the demand for OPEC crude.

Table 10 - 1: Supply/demand balance for 2022, mb/d

							Change
	2021	1Q22	2Q22	3Q22	4Q22	2022	2022/21
(a) World oil demand	97.08	99.45	98.29	99.51	101.00	99.57	2.49
Non-OPEC liquids production	63.88	65.52	64.78	65.82	66.84	65.74	1.86
OPEC NGL and non-conventionals	5.28	5.35	5.38	5.41	5.43	5.39	0.11
(b) Total non-OPEC liquids production and OPEC NGLs	69.17	70.87	70.16	71.23	72.27	71.14	1.97
Difference (a-b)	27.91	28.58	28.13	28.28	28.73	28.43	0.53
OPEC crude oil production	26.34	28.33	28.57	29.40	29.10	28.85	2.51
Balance	-1.56	-0.26	0.44	1.11	0.37	0.42	1.98

Note: Totals may not add up due to independent rounding. Source: OPEC.

Balance of supply and demand in 2023

Demand for OPEC crude in 2023 remained unchanged from the previous assessment to stand at 29.3 mb/d. This is around 0.9 mb/d higher than in 2022.

Compared with the previous assessment, 1Q23 was revised down by 0.2 mb/d, while 3Q23 and 4Q23 were revised up by 0.1 mb/d and 0.2 mb/d, respectively. Meanwhile, demand for OPEC crude in 2Q23 remained unchanged.

Compared with the same quarters in 2022, demand for OPEC crude in 1Q23 is estimated to be 0.2 mb/d lower, while 2Q23, 3Q23 and 4Q23 are expected to be higher by 0.2 mb/d, 1.6 mb/d and 1.9 mb/d, respectively.

According to secondary sources, OPEC crude production averaged 28.8 mb/d in 1Q23, which is 0.5 mb/d higher than the demand for OPEC crude.

Table 10 - 2: Supply/demand balance for 2023*, mb/d

Change 2023 2023/22 2022 1Q23 2Q23 3Q23 4Q23 (a) World oil demand 99.57 101.55 100.80 102.03 103.25 101.91 2.35 Non-OPEC liquids production 65.74 67.75 66.99 66.73 67.24 67.17 1.43 **OPEC NGL and non-conventionals** 5.39 5.44 5.43 5.43 5.44 0.05 5.47 (b) Total non-OPEC liquids production and OPEC NGLs 71.14 73.19 72.47 72.15 72.66 72.61 1.48 28.43 28.37 28.34 29.87 30.59 29.30 0.87 Difference (a-b) **OPEC crude oil production** 28.85 28.82 0.42 0.45

Note: * 2023 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.

Table 11 - 1: World oil demand and supply balance, mb/d

World oil demand and supply													
balance	2019	2020	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023
World demand	2013	2020	2021	1 0(22	LGLL	JUZZ	T (1,2,2	LULL	IQZJ	EQEU	JQZJ	TQ2 5	2020
Americas	25.40	22.45	24.32	24.77	24.98	25.33	24.95	25.01	24.61	25.14	25.51	25.09	25.09
of which US	20.58	18.35	20.03	20.38	20.41	20.62	20.32	20.43	20.16	20.43	20.75	20.37	20.43
					13.43							13.37	
Europe	14.31	12.41	13.13	13.19		14.07	13.34	13.51	12.93	13.33	14.10		13.43
Asia Pacific	7.95	7.17	7.38	7.85	6.99	7.22	7.68	7.43	7.89	7.05	7.27	7.70	7.47
Total OECD	47.66	42.03	44.82	45.81	45.39	46.62	45.97	45.95	45.44	45.52	46.87	46.15	46.00
China	13.81	13.94	15.00	14.77	14.45	14.67	15.51	14.85	15.63	15.56	15.43	16.16	15.70
India	4.99	4.51	4.77	5.18	5.16	4.95	5.26	5.14	5.40	5.41	5.21	5.50	5.38
Other Asia	9.06	8.13	8.67	9.13	9.31	8.77	8.89	9.02	9.40	9.65	9.14	9.24	9.35
Latin America	6.59	5.90	6.23	6.32	6.36	6.55	6.52	6.44	6.60	6.49	6.71	6.68	6.62
Middle East	8.20	7.45	7.79	8.06	8.15	8.53	8.44	8.29	8.63	8.47	8.86	8.73	8.67
Africa	4.44	4.08	4.22	4.51	4.15	4.25	4.69	4.40	4.69	4.34	4.43	4.88	4.59
Russia	3.57	3.39	3.61	3.67	3.42	3.45	3.71	3.56	3.68	3.45	3.59	3.87	3.65
Other Eurasia	1.19	1.07	1.21	1.22	1.16	1.00	1.21	1.15	1.24	1.16	1.02	1.22	1.16
Other Europe	0.76	0.70	0.75	0.79	0.75	0.73	0.80	0.77	0.84	0.76	0.75	0.83	0.80
Total Non-OECD	52.62	49.16	52.25	53.65	52.90	52.89	55.03	53.62	56.12	55.29	55.16	57.10	55.92
(a) Total world demand	100.27	91.19	97.08	99.45	98.29	99.51	101.00	99.57	101.55	100.80	102.03	103.25	101.91
Y-o-y change	1.08	-9.09	5.89	5.17	2.58	1.78	0.50	2.49	2.10	2.51	2.52	2.25	2.35
Non-OPEC liquids production													
Americas	25.88	24.87	25.45	26.09	26.50	27.26	27.50	26.84	27.87	27.90	28.21	28.44	28.11
of which US	18.53	17.76	18.04	18.51	19.07	19.57	19.68	19.21	20.07	20.18	20.34	20.47	20.26
Europe	3.74	3.92	3.79	3.72	3.46	3.51	3.59	3.57	3.66	3.69	3.80	3.94	3.77
•	0.52	0.52	0.51			0.43	0.49	0.48		0.48	0.49		0.48
Asia Pacific				0.49	0.51				0.46			0.48	
Total OECD	30.15	29.31	29.75	30.30	30.48	31.20	31.58	30.89	32.00	32.06	32.50	32.85	32.36
China	4.05	4.16	4.32	4.54	4.54	4.42	4.42	4.48	4.63	4.59	4.50	4.50	4.56
India	0.83	0.78	0.78	0.79	0.78	0.76	0.76	0.77	0.76	0.78	0.78	0.78	0.78
Other Asia	2.75	2.53	2.42	2.37	2.32	2.24	2.31	2.31	2.33	2.35	2.34	2.37	2.35
Latin America	6.09	6.02	5.96	6.11	6.18	6.46	6.59	6.34	6.70	6.67	6.70	6.79	6.72
Middle East	3.16	3.15	3.19	3.23	3.28	3.32	3.30	3.29	3.27	3.29	3.30	3.30	3.29
Africa	1.51	1.41	1.34	1.31	1.30	1.31	1.28	1.30	1.26	1.32	1.32	1.31	1.31
Russia	11.51	10.54	10.80	11.33	10.63	11.01	11.17	11.03	11.23	10.38	9.76	9.78	10.28
Other Eurasia	3.07	2.91	2.93	3.04	2.76	2.59	2.92	2.83	2.99	2.98	2.94	2.98	2.97
Other Europe	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.11	0.10	0.10	0.10	0.10	0.10
Total Non-OECD	33.08	31.64	31.85	32.82	31.90	32.22	32.86	32.45	33.28	32.46	31.75	31.92	32.35
Total Non-OPEC production	63.23	60.95	61.60	63.12	62.38	63.42	64.44	63.34	65.28	64.52	64.26	64.77	64.70
Processing gains	2.37	2.16	2.29	2.40	2.40	2.40	2.40	2.40	2.47	2.47	2.47	2.47	2.47
Total Non-OPEC liquids													
production	65.60	63.11	63.88	65.52	64.78	65.82	66.84	65.74	67.75	66.99	66.73	67.24	67.17
OPEC NGL +	00.00	00.11	00.00	00.02	04.70	00.02	00.04	00.14	01110	00.00	00.70	V1.12-1	07117
non-conventional oils	5.21	5.17	5.28	5.35	5.38	5.41	5.43	5.39	5.44	5.47	5.43	5.43	5.44
(b) Total non-OPEC liquids	J.Z I	5.17	5.20	0.00	5.50	J. 4 I	5.45	5.59	3.44	3.47	J. 4 J	5.45	J. 44
• •	70.00	68.27	69.17	70.87	70.16	71.23	72.27	71.14	73.19	72.47	72.15	72.66	70.64
production and OPEC NGLs	70.82												72.61
Y-o-y change	2.14	-2.55	0.90	2.73	1.29	2.07	1.78	1.97	2.32	2.31	0.93	0.39	1.48
OPEC crude oil production		0==0			00 ==	00.40	00.40						
(secondary sources)	29.36	25.72	26.34	28.33	28.57	29.40	29.10	28.85	28.82				
Total liquids production	100.18	93.99	95.51	99.20	98.73	100.62	101.37	99.99	102.01				
Balance (stock change and													
miscellaneous)	-0.09	2.80	-1.56	-0.26	0.44	1.11	0.37	0.42	0.45				
OECD closing stock levels,													
mb													
Commercial	2,894	3,037	2,651	2,613	2,665	2,746	2,776	2,776	2,778				
SPR	1,535	1,541	1,484	1,442	1,343	1,245		1,214	1,223				
Total	4,429	4,578	4,134	4,055	4,009	3,991	3,990	3,990	4,001				
Oil-on-water	1,033	1.148	1,202	1,231	1,304	-	1,399	1,399	1,413				
Days of forward consumption	1,000	1,140	1,202	1,201	1,50-	1, 407	1,555	1,555	1,410				
in OECD, days													
	60	60	E0	E0	57	60	61	60	61				
Commercial onland stocks	69	68	58	58	57	60	61	60					
SPR	37	34	32	32	29	27	27	26	27				
Total	105	102	90	89	86	87	88	87	88				
Memo items	00-10-	00-00	07.0	00.70	00-10	00.00	00-50	00.10	00.00	00.00	00.05	00-50	00.00
(a) - (b)	29.46	22.92	27.91	28.58	28.13	28.28	28.73	28.43	28.37	28.34	29.87	30.59	29.30

Note: Totals may not add up due to independent rounding. Source: OPEC.

Oil Market Report - June 2023

Part of Oil Market Report Flagship report June 2023

About this report

The IEA Oil Market Report (OMR) is one of the world's most authoritative and timely sources of data, forecasts and analysis on the global oil market – including detailed statistics and commentary on oil supply, demand, inventories, prices and refining activity, as well as oil trade for IEA and selected non-IEA countries.

Highlights

- World oil demand will grow by 2.4 mb/d in 2023 to 102.3 mb/d, a new record. China's rebound continues unabated, with its oil demand reaching an all-time high of 16.3 mb/d in April. The non-OECD accounts for 90% of gains this year, as OECD demand remains lacklustre amid the current manufacturing slump. An increasingly adverse macroeconomic climate will act as a headwind in 2024, and as the post-pandemic recovery will largely have run its course, oil demand growth is set to slow to 860 kb/d.
- Non-OPEC+ leads world supply growth through next year, adding 1.9 mb/d in 2023 and 1.2 mb/d in 2024. As for OPEC+, total oil output in 2024 is set to decline by 200 kb/d as production curbs are carried through the year. Total oil supply is forecast to reach record high levels of 101.3 mb/d this year and 102.3 mb/d next year. In May, world oil supply fell by 660 kb/d to 100.6 mb/d after extra cuts from some OPEC+ producers kicked in. Saudi Arabia has promised to curb output by a further 1 mb/d in July.
- Russian oil exports dropped by 260 kb/d in May to 7.8 mb/d, largely unchanged from a year ago. Crude oil exports rose by 90 kb/d to 5.2 mb/d while product exports slumped by 350 kb/d to 2.6 mb/d. China and India accounted for at least 56% of total Russian exports, while shipments to Africa, the Middle East and Latin America made up another 12%. Estimated export revenues fell by \$1.4 bn to \$13.3 bn, down 36% on a year ago, with average crude prices easing from \$60/bbl in April to \$55/bbl in May.
- Global refinery throughputs are forecast to increase by 1.8 mb/d in 2023 and 1 mb/d next year when it averages 83.4 mb/d. A further decline in OECD crude runs next year is more than offset by the 1.3 mb/d increase in non-OECD activity. New capacity in Oman and Kuwait and ample availability of discounted Russian crude in Asia skews activity away from the Atlantic Basin. Refinery margins were stable in May, with gains in Atlantic Basin light distillates partially offset by weaker middle distillates.
- Global observed oil inventories rose by 10 mb in April as a 15.9 mb decline in oil on water and a 1.1 mb drop in non-OECD stocks partly offset a 27 mb build in OECD stocks. OECD industry stocks rose by 33.6 mb but were still 86.4 mb lower than the five-year average. Preliminary May data show a further stock build in OECD countries of 21.1 mb.
- North Sea Dated fell by around 10% in May compared with April amid growing concerns about the impact of hawkish central bank policies on the global economy. Attesting to oil's bear market, the current ICE Brent future price of around \$73/bbl is \$50/bbl below

summer 2022's peak. Saudi Arabia's announcement of deeper output cuts in early June was unable to stem the decline.

Mixed signals

Oil markets are struggling for direction as conflicting data points cloud the outlook. Bearish macroeconomic indicators and concerns over demand growth are clashing with resurgent oil use in key consuming countries. Oil prices appear to be taking their cue from the former, with benchmark North Sea Dated trading at \$73/bbl - nearly half the high of 2022 - despite a looming supply deficit.

Global oil demand continues to defy the challenging macroeconomic climate and is set to rise by 2.4 mb/d in 2023, outpacing last year's 2.3 mb/d increase as well as earlier expectations. China accounts for 60% of the gains, with soaring transport and petrochemical use propelling apparent demand in April to an all-time high of 16.3 mb/d. Indian demand is equally robust with the latest readings for May showing both gasoline and diesel breaking records.

By contrast, OECD demand remains lacklustre amid an ongoing manufacturing slump and generally subdued economic growth. Having spent 4Q22 and 1Q23 in contraction, the OECD returns to muted growth in 2Q23, with the US driving season getting off to a strong start. In advanced and developing economies alike, rebounding air traffic is consolidating jet/kerosene's position as the main contributor to global 2023 demand gains (1.1 mb/d).

While oil demand is expected to continue to rise, both seasonally and structurally over the remainder of the year, only a marginal increase in supply is foreseen. In May, world oil production fell by 660 kb/d to 100.6 mb/d. Deeper cuts from some OPEC+ producers kicked in while output from Iraq's northern Kurdish region and some Canadian oil sands remained shut in. Saudi Arabia, with its voluntary cut of 500 kb/d agreed in April, led the monthly drop in world supply, but the overall decline was stemmed by a seasonal 330 kb/d rise in biofuels along with higher flows from Nigeria and elsewhere. The Kingdom has promised to slash output by a further 1 mb/d in July to a two-year low of 9 mb/d. Riyadh made the pledge at the 4 June OPEC+ meeting that rolled over the bloc's existing curbs through 2024 and readjusted some targets to better reflect actual supply.

With the post-Covid rebound having largely run its course, global demand growth is set to decelerate to 860 kb/d next year. The impact of the unprecedented monetary policy tightening can further curtail activity and limit advanced economies to a second year of subpar growth in 2024. Combined with improved vehicle efficiencies and widespread teleworking, this will push OECD deliveries into decline. Conversely, non-OECD oil use will continue to expand. On a global level, petrochemical feedstocks will replace jet fuel as the main driver, accounting for half of the total gain.

Supply growth, too, is forecast to lose momentum next year – rising 1 mb/d compared to 1.4 mb/d in 2023. The United States continues to dominate non-OPEC+ supply increases, but gains are set to ease from 1.9 mb/d to 1.2 mb/d in 2024 as growth halves in the US shale patch. While the adjustments to individual OPEC+ member targets will not materially impact production this year, the extension of quotas through 2024 means that, following a 470 kb/d decrease this year,

OPEC+ output could fall a further 200 kb/d next year. Altogether, this could leave the market in deficit in 2024, with the second half looking particularly tight.

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OPEC+ crude oil production¹ million barrels per day

	Apr 2023 Supply	May 2023 Supply	May Prod vs Target	May-2023 Target	Sustainable Capacity ²	Eff Spare Cap vs May ³
Algeria	1	0.97	-0.04	1.01	1.0	0.03
Angola	1.06	1.11	-0.34	1.46	1.11	-0.0
Congo	0.28	0.28	-0.03	0.31	0.27	-0.01
Equatorial Guinea	0.05	0.05	-0.07	0.12	0.06	0.01
Gabon	0.2	0.21	0.03	0.18	0.19	-0.02
Iraq	4.09	4.09	-0.34	4.43	4.75	0.66
Kuwait	2.68	2.57	-0.11	2.68	2.83	0.26
Nigeria	1.02	1.22	-0.52	1.74	1.33	0.11
Saudi Arabia	10.48	9.98	-0.5	10.48	12.25	2.27
UAE	3.32	3.2	0.18	3.02	4.2	1.0
Total OPEC-10	24.18	23.68	-1.74	25.42	28.0	4.35
Iran ⁴	2.79	2.87			3.8	
Libya ⁴	1.13	1.15			1.22	0.07
Venezuela ⁴	0.78	0.8			0.84	0.04
Total OPEC	28.88	28.5			33.86	4.45
Azerbaijan	0.51	0.5	-0.18	0.68	0.54	0.04
Kazakhstan	1.65	1.58	-0.05	1.63	1.67	0.09
Mexico ⁵	1.67	1.68		1.75	1.68	0.0
Oman	0.84	0.8	-0.04	0.84	0.85	0.05
Russia	9.6	9.45	-0.37	9.83	9.98	
Others ⁶	0.83	0.85	-0.2	1.06	0.82	0.01
Total Non-OPEC	15.1	14.86	-0.85	15.79	15.54	0.19
OPEC+ 19 in cut deal ⁴	37.61	36.86	-2.59	39.45	41.86	4.53
Total OPEC+	43.98	43.36			49.4	4.64

1. Excludes condensates: 2. Capacity levels can be reached within 90 days and sustained for an extended period. 3. Excludes shut in Iranian, Russian crude. 4. Iran, Libya, Venezuela exempt from cuts. 5. Mexico excluded from OPEC+ compliance. Only cut in May, June 2020. 6. Bahrain, Brunel, Malaysia, Sudan and South Sudan.

IEA World Oil Supply and Demand Forecasts: Summary (Correct)

2023-06-14 08:59:24.283 GMT

By Kristian Siedenburg

(Bloomberg) -- Following is a summary of world oil supply and demand forecasts from the International Energy Agency in Paris:

	4Q	3Q	2Q	1Q	4Q	3Q	2Q	1Q			
	2024	2024	2024	2024	2023	2023	2023	2023	2024	2023	
	Demand										
Total Demand	104.4	104.1	102.5	101.5	103.5	103.4	101.6	100.5	103.1	102.3	
Total OECD	46.0	46.7	45.5	45.1	46.6	47.1	45.7	45.5	45.8	46.2	
Americas	24.9	25.3	24.8	24.3	25.2	25.6	25.2	24.6	24.8	25.1	
Europe	13.3	14.0	13.4	12.9	13.5	14.1	13.5	13.1	13.4	13.6	
Asia Oceania	7.8	7.4	7.2	7.9	7.9	7.5	7.0	7.9	7.6	7.6	
Non-OECD countries	58.3	57.3	57.0	56.4	56.9	56.2	55.9	55.0	57.3	56.0	
FSU	5.0	5.0	4.7	4.8	5.0	5.0	4.8	4.9	4.9	4.9	
Europe	8.0	0.8	8.0	0.8	8.0	0.8	0.8	0.8	8.0	0.8	
China	17.2	16.4	16.5	16.4	16.6	16.2	16.3	15.6	16.6	16.1	
Other Asia	15.2	14.5	14.8	14.7	14.7	14.0	14.3	14.3	14.8	14.3	
Americas	6.5	6.6	6.4	6.2	6.4	6.4	6.2	6.2	6.4	6.3	
Middle East	9.1	9.7	9.4	9.0	9.1	9.7	9.3	8.9	9.3	9.2	
Africa	4.5	4.4	4.4	4.4	4.4	4.2	4.3	4.4	4.4	4.3	
	Supply										
Total Supply	n/a	n/a	n/a	n/a	n/a	n/a	n/a	101.6	n/a	n/a	
Non-OPEC	68.6	68.7	68.3	67.6	67.5	67.5	66.9	66.9	68.3	67.2	
Total OECD	31.4	31.1	31.0	31.0	31.0	30.6	30.3	30.4	31.1	30.6	
Americas	27.7	27.5	27.4	27.2	27.2	27.1	26.7	26.6	27.4	26.9	
Europe	3.2	3.2	3.1	3.3	3.3	3.1	3.2	3.3	3.2	3.2	
Asia Oceania	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	
Non-OECD	31.5	31.5	31.5	31.4	31.0	30.9	31.0	31.6	31.5	31.1	
FSU	13.7	13.6	13.6	13.6	13.5	13.4	13.6	14.1	13.6	13.7	
Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
China	4.3	4.3	4.3	4.3	4.2	4.3	4.3	4.3	4.3	4.3	
Other Asia	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	2.6	2.7	
Americas	6.5	6.5	6.4	6.4	6.2	6.1	5.9	6.0	6.4	6.0	
Middle East	3.1	3.1	3.1	3.1	3.1	3.1	3.2	3.2	3.1	3.1	
Africa	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.3	1.3	
Processing Gains	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.4	2.4	
Total OPEC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	34.7	n/a	n/a	
Crude	n/a	n/a	n/a	n/a	n/a	n/a	n/a	29.3	n/a	n/a	
Natural gas											
liquids NGLs	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	
Call on OPEC crude											
and stock change *	30.3	29.9	28.8	28.5	30.6	30.5	29.3	28.2	29.4	29.7	

NOTE: Figures are in million of barrels per day. (*) equals total demand minus non-OPEC supply and OPEC natural gas liquids.

IEA changed the way it measures OPEC supply, adopting the industry-standard approach of counting most of Venezuela's Orinoco heavy oil as "crude oil." SOURCE: International Energy Agency

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To view this story in Bloomberg click here: https://blinks.bloomberg.com/news/stories/RW8JN0GFA9Z4

IEA: May Crude Oil Production in OPEC Countries (Table)

2023-06-14 08:00:00.1 GMT

By Kristian Siedenburg

(Bloomberg) -- Following is a summary of oil production in

OPEC countries from the International Energy Agency in Paris:

	May	April	May
	2023	2023	MoM
Total OPEC	28.50	28.88	-0.38
Total OPEC10	23.68	24.18	-0.50
Algeria	0.97	1.00	-0.03
Angola	1.11	1.06	0.05
Congo	0.28	0.28	0.00
Equatorial Guinea	0.05	0.05	0.00
Gabon	0.21	0.20	0.01
Iraq	4.09	4.09	0.00
Kuwait	2.57	2.68	-0.11
Nigeria	1.22	1.02	0.20
Saudi Arabia	9.98	10.48	-0.50
UAE	3.20	3.32	-0.12
Iran	2.87	2.79	0.08
Libya	1.15	1.13	0.02
Venezuela	0.80	0.78	0.02

NOTE: Figures are in million of barrels per day. Monthly level change calculated by Bloomberg. Production data excludes condensates.

OPEC10 excludes Iran, Libya and Venezuela.

SOURCE: International Energy Agency

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IEA REPORT WRAP: Oil Demand to Slow as Peak Nears; 2024 Deficit

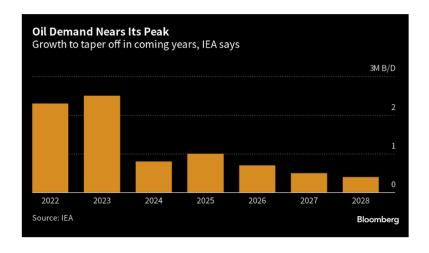
2023-06-14 08:57:54.678 GMT

By Rachel Graham

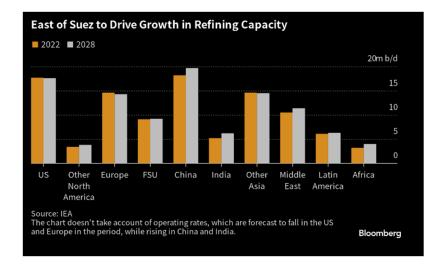
(Bloomberg) -- Summary of stories from the IEA's Oil 2023 report:

- * Oil Demand Growth to Slow Dramatically as Peak Nears
- ** Demand to rise by 2.4m b/d to record 102.3m b/d in 2023
- *** 2023 demand estimate raised by about 200k b/d vs last report
- *** Jet/kero to add 1.1m b/d in 2023
- *** Demand growth to slow to 860k b/d in 2024
- * Global Oil Supply Growth to Slow Through to 2028
- ** Global oil supply to add 1.4m b/d in 2023, then 1m in 2024
- ** Global oil supply to rise to record 101.3m b/d in 2023,

* Oil Market Set for Deficit Next Year Amid OPEC+ Cuts



- * IEA World Oil Supply/Demand Key Forecasts
- ** Click here for detailed quarterly forecast table by region
- ** Click here for revisions to supply/demand forecast
- * OPEC Crude Output Fell 380k B/D Last Month on Saudi Cut
- ** OPEC oil output to fall by 470k b/d in 2023, 200k b/d in 2024
- ** Click here for OPEC May production table
- * Russia Oil Output to Fall Through 2028 Amid Sanctions
- ** Russia's Oil Revenue Fell in May on Lower Prices
- ** May oil exports fell 260k b/d in May to 7.8M b/d; May crude exports rose 90k b/d, while products fell by 350k
- * Global Refining Is Set for Shift as Jet Fuel Demand to Grow
- ** Global oil refining runs to rise by 1.8m b/d in 2023 and 1m b/d in 2024



- * Other stories include:
- ** Oil Emissions to Fall by 11% on Absolute Basis by 2028
- ** US Shale Oil Growth at Risk From Lower Prices, Higher Costs
- ** Brazil, India to Lead Growth in Biofuel Supply Through 2028

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Oil Demand Growth to Slow Sharply as Peak Nears, IEA Says (1)

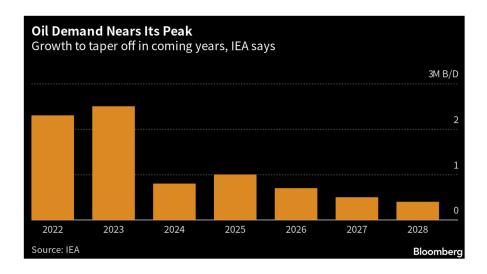
2023-06-14 08:30:27.70 GMT

By Grant Smith

(Bloomberg) -- Global oil demand growth will taper off over the next few years as high prices and Russia's invasion of Ukraine speed up the transition away from fossil fuels, the International Energy Agency said.

Consumption in 2024 will grow at half the rate seen in the prior two years, and an ultimate limit for demand will arrive this decade as electric vehicles send the use of gasoline by cars into decline, the Paris-based IEA predicted in a mediumterm outlook. With production capacity still growing, markets will remain "adequately supplied" through to 2028, it said. "Growth in the world's demand for oil is set to slow almost to a halt in the coming years," said the agency, which advises major economies. "The shift to a clean energy economy is picking up pace, with a peak in global oil demand in sight before the end of this decade."

Consuming nations have for years been engaged in a shift away from fossil fuels in order to limit emissions of greenhouse gases and avert catastrophic climate change. That ambition that was fortified when oil and gas prices soared after Russia attacked its neighbor in early 2022.



The short-term and long-term outlooks differ greatly. World oil markets may tighten "significantly" over the next few months as China's fuel consumption rebounds from the pandemic, while OPEC+ producers led by Saudi Arabia reduce production, the agency said. Oil is trading near \$75 a barrel in London.

Next year also looks tight, particularly in the second half, with oil inventories set to decline even as global demand growth drops to 860,000 barrels a day, compared with 2.4 million barrels a day this year, or about 2%.

Yet the subsequent years will bring a world less dependent on hydrocarbons. Global growth in fuel consumption will dwindle to just 400,000 barrels a day in 2028, according to the IEA's report. Global demand will reach 105.7 million barrels a day by that point.

The use of gasoline — the second-biggest oil product — will go into decline from 2023, and for oil as a transport fuel entirely three years later, with remaining growth for the commodity largely confined to petrochemicals and aviation fuel, the IEA forecasts. The need for combustible fossil fuels will hit an absolute peak of 81.6 million barrels a day in 2028. The agency had already invoked the prospect of "peak demand" arriving this decade in reports over the past few years, though the outlook was clouded recently by Covid-19 and Russia's invasion of Ukraine. A long-term projection published by the IEA in November predicted oil demand would reach a plateau in the 2030s.

Oil Expansion

While demand is slowing, investment in new supplies is rebounding. So-called upstream spending will surge 11% in 2023 to an eight-year high of \$528 billion, helping ensure that output comfortably keeps pace with demand for the rest of the decade.

Output is set to grow by 5.9 million barrels a day, or

about 6%, by 2028. That's broadly in line with the expansion in demand over the same period thanks to rising capacity in the US, Brazil and Guyana. Capacity in the OPEC+ alliance will increase by just 800,000 barrels day, led by Middle East heavyweights Saudi Arabia and the United Arab Emirates.

The anticipated leveling-off in oil consumption still won't be enough for governments around the world to meet ambitions for limiting carbon emissions. The IEA said in a report two years ago that the energy industry would need to halt investments in all new oil and gas projects in order to achieve "net zero" emissions by 2050.

The agency's forecasts have had a questionable history, such as its repeated predictions during the last decade of a looming "supply crunch" that never materialized. Its call that Russian output would immediately collapse in the wake of the invasion of Ukraine last year also proved to be overly pessimistic.

The Organization of Petroleum Exporting Countries has pushed back against the IEA's road-map to reduce oil consumption, insisting that greater investment in supplies is needed to avert price spikes and ensure affordability of energy for developing economies.

Yet the IEA's analysis indicates the energy transition has gathered momentum as the attack by Russia — a member of OPEC+ — on neighboring Ukraine spurs alarm among consumers over their reliance on oil imports. More than \$2 trillion of investment in clean energy has been lined up through to 2030, according to the report.

"Russia's invasion of Ukraine sparked a surge in oil prices and brought security of supply concerns to the fore, helping accelerate deployment of clean energy technologies," it said.

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Global Oil Supply Growth to Slow Through to 2028, IEA Says

2023-06-14 08:00:00.7 GMT

By Alex Longley
(Bloomberg) -- Growth in the world's oil production will slow from 1.9m b/d in 2022/23 to 300k b/d by 2028, the IEA said

in its Oil 2023 report.

- * Production outside the OPEC+ group will dominate expansion over the period, with a 5.1m b/d boost led by the US, Brazil and Guyana
- * Saudi Arabia, Iraq and the UAE will lead the capacity growth within OPEC+, while African and Asian members will struggle with declines
- ** OPEC+ capacity will gain 800k b/d overall
- * Relatively strong increases outside of OPEC+ alongside a slowdown in demand growth will temper requirements for OPEC+ crude
- * Spare capacity of at least 3.8m b/d will be maintained through 2028

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Oil Market Set for Deficit Next Year Amid OPEC+ Cuts, IEA Says

2023-06-14 08:00:00.34 GMT

By Grant Smith

(Bloomberg) -- Global oil inventories set to decline next year by about 800,000 barrels a day, "with the second half looking particularly tight," International Energy Agency says in first detailed look at 2024.

- * World oil demand growth will slow sharply to 860,000 barrels a day next year from 2.4 million a day in 2023 as the post-Covid rebound concludes
- ** "An increasingly adverse macroeconomic climate will act as a headwind in 2024"
- ** Global demand to average 103.1 million barrels a day in 2024
- * "Unprecedented monetary policy tightening" coupled with vehicle efficiency and remote working will lead to drop in deliveries in developed world
- * OPEC+ decision to extend output quotas into 2024 means alliance's output may fall by 200,000 barrels a day next year
- * Supply growth outside OPEC will slow to 1.2 million barrels a day in 2024 from 1.9 million a day this year

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CORRECT: IEA World Oil Supply/Demand Key Forecasts

2023-06-14 09:05:21.16 GMT

By Kristian Siedenburg

(Bloomberg) -- World oil demand 2024 forecast at 103.1m b/d in Paris-based Intl Energy Agency's latest monthly report.

- * 2023 world demand was revised to 102.3m b/d from 102m b/d
- * Demand growth in 2024 est. 0.8% y/y or 0.9m b/d
- * Non-OPEC supply 2024 estimated at 68.3m b/d
- * Call on OPEC crude 2024 estimated at 29.4m b/d
- * Call on OPEC crude 2023 was revised to 29.7 m b/d from 29m b/d
- ** OPEC crude production in May fell by 380k b/d to 28.5m b/d
- * Detailed table: FIFW NSN RW8CCIGEZ1FK <GO>
- * NOTE: Forecasts based off IEA's table providing one decimal point

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OPEC Crude Output Fell 380k B/D Last Month on Saudi Cuts: IEA

2023-06-14 08:00:00.5 GMT

By Amanda Jordan

(Bloomberg) -- OPEC's May crude output dropped 380k b/d from a month earlier to 28.5m b/d as Middle East producers led by Saudi Arabia cut supply, the IEA said in a report.

- * Saudi Arabia pumped 9.98m b/d, down 500k b/d from April
- * UAE production slid 120k b/d to 3.2m b/d
- * Kuwaiti output fell 110k b/d to 2.57m b/d
- * Iragi volumes held steady at 4.09m b/d
- * Iran, exempt from OPEC+ quotas, boosted supply to 2.87m b/d from 2.79m b/d
- * In Africa, Nigerian production rose 200k b/d to 1.22m b/d; Angolan output edged up 50k b/d to 1.11m b/d; Algerian supply slipped to 970k b/d

- * Libya, exempt from quotas, pumped 1.15m b/d, up 20k b/d
- * NOTE: On Tuesday, OPEC released its own production figures for May, estimating its 13 members pumped just over 28m b/d

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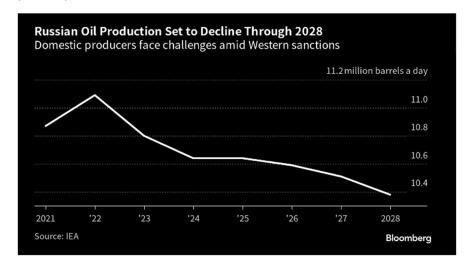
Russia Oil Output to Fall Through 2028 Amid Sanctions, IEA Says 2023-06-14 08:00:00.0 GMT

By Bloomberg News

(Bloomberg) -- Russia's oil production will decline during the next several years due to challenges it faces amid Western sanctions related to the Kremlin's war in Ukraine, the International Energy Agency said.

The country's output of crude and condensate combined will drop by 710,000 barrels a day from 2022-2028, to 10.38 million barrels a day, the agency said in its medium-term market report.

Major Western companies and investors left Russia — the world's third-largest oil producer — after the start of the war. In addition, the European Union has banned most seaborne oil imports from the country, and the Group of Seven has imposed a price cap on its crude.



Even though Russia's supply "has held up remarkably well" despite the sanctions, its upstream projects may be delayed as some domestic producers struggle to obtain equipment and

financing, according to the IEA.

Russian oil production is set to fall to 10.8 million barrels a day this year, from 11.09 million in 2022. The current estimate takes into account the country's pledge to cut 500,000 barrels a day through 2024.

"Moscow's ability to self-finance its oil industry operations and its access to Chinese equipment and services may stave off a far steeper decline," the IEA said. "But a toughening of western financial measures imposed on Russia could also result in a sharper downtrend."

Prior to the war, the IEA expected Russia's production to reach 11.3 million barrels a day in 2025, before tapering down.

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Russia's Oil Revenue Fell in May on Lower Prices, IEA Says

2023-06-14 08:00:00.12 GMT

By Bloomberg News

(Bloomberg) -- Russia's oil-export revenue in May fell to the lowest since February as supplies and prices dropped, according to the International Energy Agency.

The flow of money into the country from international oil sales totaled \$13.3 billion last month, down \$1.4 billion from

sales totaled \$13.3 billion last month, down \$1.4 billion from April, the IEA said in its monthly market report. That's a 36% decline from a year earlier.

Western restrictions on Russia's oil, including Europe's import ban and price caps imposed by the Group of Seven nations, are taking their toll on the Kremlin. Its proceeds from the key commodity — a major source of revenue for the budget — have dwindled even as supplies continue to other markets. The nation's oil and petroleum products were sold below price limits last month, according to the IEA. The weighted average export price for Russian crude slid to \$54.79 a barrel in May from \$60.22 in April, the agency calculated, using data from Argus Media Group and Kpler.



Crude and oil-product exports averaged 7.8 million barrels a day in May, or 260,000 a day lower than the previous month, according to the IEA. China and India accounted for more than half of total Russian shipments, while deliveries to Africa, the Middle East and Latin America made up 12%, the agency said.

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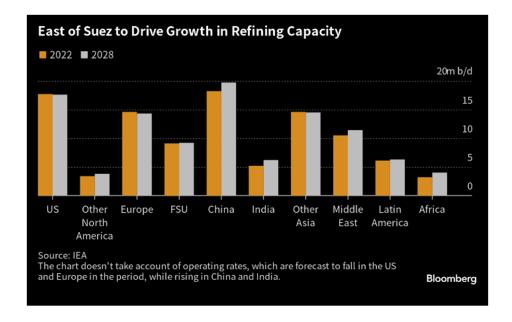
Global Refining Is Set for Shift as Jet Fuel Demand to Grow: IEA

2023-06-14 08:00:00.33 GMT

By Rachel Graham

(Bloomberg) -- Global refining will see structural shift toward middle distillates and petrochemicals as demand for road transport fuels peaks while jet fuel consumption grows, the IEA said in its Oil 2023 report.

- * Global refining capacity will expand by a net 4.4m b/d through 2028, led by East of Suez
- ** That figure is based on 6m b/d of new crude capacity, while 1.6m is scheduled to shut
- ** A further rationalization of refinery capacity may be necessary in OECD Europe and OECD Americas



- * New refining additions will far outpace oil demand growth
- ** Spare capacity forecast at 8m b/d in 2028
- ** China will remain the largest holder of spare capacity in the medium term

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Oil Emissions to Fall by 11% on Absolute Basis by 2028, IEA Says

2023-06-14 08:00:00.6 GMT

By Brian Wingfield

Carolynn Look

(Bloomberg) -- Global upstream oil emissions are set to see an absolute reduction of 11% from 2022-2028, the IEA said in its medium-term report.

- * Over the period, world's oil production set to grow by 5.8m b/d, while Scope 1 and 2 emissions intensity of upstream oil operations is set to fall by 15%
- ** NOTE: Scope 1 and 2 emissions cover direct and indirect pollution from industry
- * Oil and gas operations currently account for 15% of global energy-related emissions
- * US is world's biggest oil producer, with 19% of supply; it also has also has greatest share of emissions from oil operations, 16% of global upstream Scope 1 and 2

- ** Nation's upstream oil emissions set to drop 40% from 2022-2028, due to climate policies, even as production rises by 13%
- * Middle East set to produce 7% more oil by 2028 and 4% fewer emissions
- * "The decarbonization of oil and gas operations is needed and must be part of energy transitions"

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US Shale Oil Growth at Risk From Lower Prices, Higher Costs: IEA

2023-06-14 08:00:00.10 GMT

By Sherry Su

(Bloomberg) -- US shale growth is at risk from lower oil prices and higher costs, even as the nation's crude production is expected to set new record highs through 2027, the IEA said in its medium-term report.

- * "Equipment availability, lower reinvestment rates, productivity challenges and increased costs have squeezed the industry's ability to respond and skewed risks to the downside"
- * WTI at \$75/bbl is still sufficient to cover operating expenses even for the lowest quartile of operators in the Permian Basin; however, for many companies it is "very close to threshold pricing for drilling new wells"
- * Wellhead breakeven prices are on track for a second-year of increases, after falling almost consistently since 2015
- * Reinvestment rates of 40-60% are expected over medium term; compares with more than 160% from 2015-17
- * "Despite climate action, concerns of underinvestment and a sharp slowdown in LTO, the US is still the largest contributor to medium-term supply growth at 2.6m b/d by 2028, of which 1.7m b/d is crude oil"
- ** NOTE: LTO is light tight oil from shale regions
- * US crude production is set to rise to 13.6m b/d in 2028, led by increase in LTO, primarily from the Permian Basin

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Brazil, India to Lead Growth in Biofuel Supply Through 2028: IEA

2023-06-14 08:00:00.9 GMT

By Rachel Graham

(Bloomberg) -- Brazil, India and Indonesia will account for 70% in the growth of biofuels production through 2028, the IEA said a report.

- * Biofuels will account globally for 10% of new supply growth in liquids in the next five years, according to the Oil 2023 report
- * In advanced economies, slowing transport fuel demand will temper the increase in demand; ethanol consumption forecast to decline slightly due to static blending levels and falling gasoline demand

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Iraq, Turkey to discuss oil export resumption in Baghdad next week: Official

15-06-2023

Chenar Chalak@Chenar Qader Iso in ECONOMY

ERBIL, Kurdistan Region - Iraq and Turkey have reached an agreement to meet in Baghdad next week to discuss the resumption of the Kurdistan Region's oil exports which have been put on hold for nearly three months, said an Iraqi official on Thursday.

The Kurdistan Region's oil exports through Turkey's Ceyhan port are yet to resume after being halted in late March following a ruling from a Paris-based arbitration court saying that Ankara had breached its 1973 pipeline agreement with Baghdad.

"An agreement has been reached with Turkey to hold a meeting in Baghdad on the 19th of this month [June] to discuss the mechanism to resume the pumping of crude oil from the Kurdistan field to the Turkish Ceyhan port," Basim Mohammed Khudair, the Iraqi oil ministry's undersecretary for extraction affairs, told state-owned al-Sabah newspaper on Monday.

Khudair said that both sides have stressed the importance of restarting the exports, noting that Ankara has attributed the delay due to the inspection process.

Kurdish and Iraqi authorities have repeatedly declared their willingness to resume the exports, saying the reason the reason the process has not yet restarted is because Turkey wants to inspect and rehabilitate the port tubes that might have been damaged following February's earthquake.

The International Monetary Fund said earlier this month that growth momentum in Iraq's economy has slowed down in recent months, largely affected by the oil production cuts and the halt in exporting Kurdistan Region's oil.

Article 13 of the recently-passed Iraqi federal budget bill obliges the Kurdistan Region to hand over, on a daily basis, at least 400,000 barrels of crude oil to the country's State Oil Marketing Organization (SOMO) to be exported through the Ceyhan port, or be used domestically in case it is not exported.

https://tass.ru/ekonomika/18046379

17 June, 01:16, Updated June 17, 01:17

Sechin: carbon neutrality in the world is unattainable with the current pool of "green" technologies

The head of Rosneft noted that the declared energy transition is not provided with the necessary technologies

ST. PETERSBURG, June 17. /TASS/. The current pool of "green" technologies cannot ensure the achievement of carbon neutrality on a global scale. Improving technologies in traditional production gives a greater effect in terms of real reduction in emissions, said the head of Rosneft Igor Sechin.

"In fact, carbon neutrality is unattainable on a global scale, given the current pool of green technologies - many of the necessary technologies are still at the stage of pilot development," he said, speaking at the energy panel at the St. Petersburg International Economic Forum.

Sechin noted that the declared energy transition is not provided with the necessary technologies.

"We are faced with the fact that "renewable energy" is not essentially renewable. The global economy does not have the metals, rare earth minerals, energy, time and money to make this transition," he said. The head of Rosneft added that the authors of the "green transition" need to coordinate the rules with those who have production capabilities and the appropriate resource base, in particular, with China, where a significant part of the production of equipment for renewable energy is concentrated.

At the same time, in his opinion, oil and gas technologies are currently at the peak of their development, they have no equal in terms of technical and economic efficiency, and in terms of physical indicators - energy density and calorific value - they can only be surpassed by hydrogen and thermonuclear fusion that have not yet been mastered.

"To date, the improvement of technologies in traditional production has a greater effect in terms of real emission reductions than investments in immature "alternative" technologies. Thus, at the current stage of the green transition, the oil and gas sector itself should become a priority," he added.

According to Sechin, the fallacy of abandoning oil and gas is recognized even by oil and gas companies, "which previously relied on an accelerated energy transition, and are now postponing previously announced goals."

As an example, he cited the British company BP, which in February of this year admitted that the world needs oil and gas more than the company previously expected, and by 2030 will invest an additional \$ 8 billion in new production projects. Another British company, Shell, has revised its strategic guidelines with an emphasis on long-term stability and maintaining production, which provides shareholders with higher returns compared to green projects. Italy's Eni has announced a 15% increase in investment over a four-year horizon, mainly due to oil and gas exploration and production.

RussiaSechin, Igor IvanovichSPIEF

Sojitz cancels Hokkaido wind project due to costs and local objections



A construction site lined with windmill blades and platforms in Otaru, Hokkaido, in May | GREEN POWER INVESTMENT / VIA KYODO

BY ERICA YOKOYAMA

BLOOMBERG

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Jun 17, 2023

Japanese trading company Sojitz canceled its plan to build a wind power plant in Hokkaido, amid soaring material costs and growing local criticism about the environmental impact of the project.

"After re-examining the business plan from various perspectives, including the recent sharp rise in material prices, we have concluded that this project does not meet Sojitz's investment criteria," the company in a statement on Saturday.

The decision adds to a recent trend of wind project cancellations, creating a headache for the Japanese government, which is seeking to <u>significantly</u> increase green energy production, particularly in Hokkaido.

Sojitz had intended to construct large wind turbines in state-owned forests located in the city of Otaru and town of Yoichi in Hokkaido. The turbines were expected to operate for 20 years from 2029, with a total output of 109 megawatts.

Apart from financial concerns, the project also faced opposition from local residents who expressed worries about its potential impact on the environment. Hokkaido Gov. Naomichi Suzuki said Friday that the local community lacked a clear understanding of the project.

Sojitz said "the outcome is regrettable," saying it had proposed changes to the layout and other measures to mitigate the impact on the landscape.

Recently, several other wind farm projects, including those proposed by Kansai Electric Power and Hitachi Zosen, were also scrapped amid heightened local objections. These setbacks are likely to pose challenges for the Japanese government, which aims to have renewables contribute 36% to 38% of the power supply by 2030.

Alberta Crop Report

Crop conditions as of June 13, 2023

A provincial state of emergency was declared on May 6 due to the number of wildfires in the province, and ended on June 3. The wildfire situation in the northern areas of the province remains serious.

Light and sporadic showers experienced across the province have failed to be enough to boost crop condition ratings and soil moisture reserves as of June 13 (see the Map). Many areas continue to report hot and dry temperatures that have further depleted soil moisture conditions continuously since May 23. The Peace Region has received the most moisture the past week with up to 60 mm (as well as select south west parts of the South Region), while the majority of the Central, North East and South Regions received 0-5 mm. This has caused crops across the province to show signs of stress and mature quicker than normal.

As of June 13, provincial crop growing conditions are rated as 43 per cent good to excellent conditions, 32 per cent below the 5-year average and 31 per cent below the 10-year average. Potatoes, lentils, chickpeas, and durum are rated in the best condition provincially, whereas canola and barley are rated the lowest. While the Peace Region isn't experiencing the same poor growing conditions (rated at 72 per cent of crops in good to excellent condition) thanks to adequate rain, the rest of the province is seeing the lowest ratings since 2009 and 2015. Currently, 56 per cent of all crops in the North East Region are rated as good to excellent, followed by the South (46 per cent), the Central (23 per cent) and the North West (18 per cent). Last week, 93 per cent of crops had emerged. Currently, 55 per cent of broad leaf crops are in the 4-6 leaf/node stage moderately ahead of the 5-year average of 45 per cent and spring cereals are just entering stem elongation. While some fields are so dry that there are dormant seedlings struggling to get going, other cereals have already produced a flag leaf as they rush into heading.

Table 1: Regional Crop Condition Ratings as of June 13, 2023

	Per cent rated in Good to Excellent Conditions					
	South	Central	N East	N West	Peace	Alberta
Spring Wheat*	37.9%	21.3%	60.2%	20.0%	73.0%	42.4%
Durum	67.0%	37.1%	-	-	-	62.7%
Barley*	35.8%	18.6%	54.6%	20.9%	73.3%	36.1%
Oats*	49.1%	24.5%	62.4%	21.3%	73.9%	47.0%
Canola*	29.4%	22.3%	50.3%	13.6%	70.2%	39.7%
Dry Peas*	44.1%	38.9%	68.5%	21.6%	77.1%	52.5%
Mustard	65.7%	40.0%	-	-	-	59.6%
Flax	53.0%	48.8%	86.2%	-	-	57.7%
Potatoes	88.3%	0.0%	-	73.5%	-	83.5%
Chickpeas	72.3%	55.4%	-	-	-	71.0%
Lentils	73.9%	58.2%	-	-	-	71.4%
All Crops, June 13	45.5%	23.3%	55.6%	17.7%	72.0%	43.4%
Major Crops(*), June 13	35.6%	21.9%	55.6%	17.6%	72.0%	40.9%
All Crops(*), June 14, 2022	63.0%	79.8%	79.1%	80.8%	78.8%	74.6%
5-year All Crops (2018-2022)	68.0%	81.9%	82.6%	71.7%	73.3%	75.8%
10-year All Crops (2013-2022)	73.6%	74.5%	80.6%	68.7%	69.8%	74.4%

Source: AGI/AFSC Crop Reporting Survey

Heavy precipitation in the near forecast will be needed to improve soil moisture conditions across majority of the province. Overall, good to excellent rated surface soil moisture conditions fell 2 per cent and sub-surface soil moisture ratings decreased 5 per cent over the past week. Overall, surface soil moisture (10-year average in brackets) is rated at 40(9) per cent poor, 32(19)

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per cent fair, 21(43) per cent good, 7(26) per cent excellent and less than one per cent (3) rated excessive. The majority of the province is rated as extremely low (once in 25-50 year dry) to less than once-in-50-years dry (see the Map). Currently, sub surface soil moisture (10-year average in brackets) is rated as 37(9) per cent poor, 32(23) per cent fair, 24(45) per cent good, 7(21) per cent excellent and 0(2) per cent excessive.

Table 2: Alberta Surface Soil Moisture Ratings as of June 13, 2023

	Poor	Fair	Good	Excellent	Excessive
South	34.1%	35.7%	22.5%	7.6%	0.0%
Central	53.7%	27.8%	17.3%	1.2%	0.0%
North East	35.1%	38.3%	25.7%	0.9%	0.0%
North West	55.7%	27.6%	16.2%	0.4%	0.0%
Peace	12.2%	24.2%	25.3%	35.4%	2.9%
Alberta	40.0%	31.8%	21.2%	6.6%	0.3%
5-year (2018-2022) Avg	8.4%	20.4%	46.0%	22.5%	2.8%
10-year (2013-2022) Avg	8.6%	19.0%	43.1%	25.9%	3.4%

Source: AGI/AFSC Crop Reporting Survey

Even though pasture and tame hay conditions rated good to excellent increased by 4 and 3 per cent, respectively, conditions are still well below the 5- and 10-year averages. Tame hay is reported to be flowering, while pasture grass is heading out and as a result is being cut for hay and silage and rotated through grazing cycles sooner than normal. First cut haying progress is reported to range from 2 per cent complete in the Peace to 12 per cent complete in the North West. Tame hay is rated as (10-year average in brackets) 39(10) per cent poor, 26(24) per cent fair, 31(51) per cent good, and 4(15) per cent excellent. Pasture conditions are rated as (10-year average in brackets) 37(13) per cent poor, 23(24) per cent fair, 38(51) per cent good and 2(13) per cent excellent.

Table 3: Pasture Growth Conditions as of June 13, 2023

	Poor	Fair	Good	Excellent
South	30.1%	22.7%	46.7%	0.5%
Central	43.3%	20.0%	33.7%	2.9%
North East	36.4%	23.8%	39.8%	0.0%
North West	58.5%	27.0%	14.6%	0.0%
Peace	10.3%	34.3%	45.5%	9.9%
Alberta	36.8%	23.2%	38.2%	1.8%
5-year (2018-2022) Avg	12.6%	27.7%	50.2%	9.5%
10-year (2013-2022) Avg	12.5%	24.1%	50.7%	12.7%

Source: AGI/AFSC Crop Reporting Survey

Spring Wheat Soil Moisture Reserves Relative to Long Tem North Lang Server Serv

Regional Assessments:

Region One: South (Strathmore, Lethbridge, Medicine Hat, Foremost)

- Precipitation in the South Region was scattered and ranged from less than one mm in the north east part of the region and up to 60 mm in the south west part of the region.
- Crops in the region are rated at 46 good to excellent, 23 and 28 per cent behind the 5- and 10-year average, respectively.
- The fifth node is detectable on most spring seeded crops and head emergence is nearly complete on fall seeded cereals. About 59 per cent of canola, 61 per cent of dry peas, 61 per cent of lentils are in the 4-6 leaf/node stage.
- Roughly 70 per cent of post emergent spraying is completed in the South, though some spraying is being delayed as
 to not further stress crops. Both grasshoppers and flea beetles are being reported over threshold.
- Surface soil moisture is now rated at (sub-surface soil moisture ratings shown in brackets) 34 (35) per cent poor, 36 (30 per cent fair, 23 (24) per cent good and 8 (11) per cent excellent, with 0(0) per cent excessive.
- Hay and pasture conditions in the South fell the most of all regions over the last week. Haying has started as some perennial crops have started regressing. Currently, pasture is rated at (tame hay conditions in brackets) 30 (35) per cent poor, 23 (27) per cent fair, 47 (38) per cent good, and 1(1) per cent excellent.

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Region Two: Central (Rimbey, Airdrie, Coronation, Oyen)

- Little moisture was experienced during the past week that has left the Central Region mostly dry.
- In the region, 23 per cent of all crops are rated at good to excellent, 59 and 51 per cent behind the 5- and 10-year average, respectively.
- The majority of spring seeded crops are in the late stages of tillering and fall seeded crops are roughly half complete head emergence. About 53 per cent of canola, 38 per cent of dry peas, and 56 per cent of lentils are in 4-6 leaf/node stage.
- Post-emergent spraying is 57 per cent complete. Some areas reported grasshoppers, army cutworms and gophers
 as being over threshold.
- Surface soil moisture is now rated at (sub-surface soil moisture ratings shown in brackets) 54(51) per cent poor, 28(31) per cent fair, 17(18) per cent good and 1(0) per cent excellent, with 0(0) per cent excessive.
- Hay is starting to be cut as both forages and pastures are flowering and heading out in the dry and hot conditions.
 Currently, pasture is rated at (tame hay conditions in brackets) 43(53) per cent poor, 20(18) per cent fair, 34(23) per cent good, and 3(6) per cent excellent.

Region Three: North East (Smoky Lake, Vermilion, Camrose, Provost)

- Conditions have been dry as dugouts are severely lacking in water levels and producers are expecting only one cut of
 hay with current conditions. Very little precipitation was seen over the past week.
- Crop conditions are rated at 56 per cent good to excellent in the North East, 27 and 25 per cent behind the 5- and 10year average, respectively.
- The majority of spring seeded crops are in the late stages of tillering and fall seeded crops are in the late stages of booting as the flag leaf sheath is opening. About 60 per cent of canola and 48 per cent of dry peas are in the 4-6 leaf/node stage.
- Post-emergent spraying is 57 per cent complete as farmers try to beat the forecasted precipitation. Some areas
 reported wireworms, cutworms, and gophers as being over threshold.
- Surface soil moisture is now rated at (sub-surface soil moisture ratings shown in brackets) 35 (31) per cent poor, 38 (43) per cent fair, 26 (26) per cent good and 1(0) per cent excellent, with 0(0) per cent excessive.
- Poor hay and pasture growth is reported due to the heat and stress as hay is flowering earlier than anticipated. Haying and silaging has started earlier than normal. Currently pasture is rated as (tame hay conditions in brackets) 36(44) per cent poor, 24(28) per cent fair, and 40(28) per cent good, and 0(0) excellent.

Region Four: North West (Barrhead, Edmonton, Leduc, Drayton Valley, Athabasca)

- Select rains were experienced in the North West as well as some non-damaging hail. Dugouts continue to be severely lacking and will benefit from forecasted rains.
- In the region, 18 per cent of all crops are rated at good to excellent, 54 and 51 per cent behind the 5- and 10-year average, respectively.
- The majority of spring seeded crops are in the late stages of tillering and fall seeded crops have a fifth node detectable. About 67 per cent of canola and 73 per cent of dry peas are in the 4-6 leaf/node stage.
- Post-emergent spraying is 65 per cent complete. Some areas are being re-seeding due to cutworm damage. Some areas reported grasshoppers and army cutworms over threshold.
- Surface soil moisture is now rated at (sub-surface soil moisture ratings shown in brackets) 56 (45) per cent poor, 28 (32) per cent fair, 16 (24) per cent good and 0(0) per cent excellent or excessive.
- Alfalfa has flowered early and as producers try to maximize protein potential, haying has begun in many parts of the
 region. There are reports of more intense rotational grazing and downsizing to stretch pasture for longer periods.
 Currently, pasture is rated at (tame hay conditions in bracket) 59(48) per cent poor, 27(29) per cent fair, 15(24) per
 cent good, and 0(0) per cent excellent.

Region Five: Peace (Fairview, Falher, Grande Prairie, Valleyview)

- Sporadic light rain was experienced across the Peace Region.
- Adequate rain in the region has left crops rated at 72 per cent good to excellent, 1 per cent behind the 5-year average and 2 per cent ahead of the 10-year average.
- The majority of spring seeded cereals have just produced a shoot and few have tillers. There are no fall seeded crops in this region. About 32 per cent of canola and 82 per cent of dry peas are in the 4-6 leaf/node stage.
- 35 per cent of post-emergent spraying is complete. Some areas reported re-seeding, which is necessary due to cutworm damage.





- Surface soil moisture is now rated at (sub-surface soil moisture ratings shown in brackets) 12 (10) per cent poor, 24 (25) per cent fair, 25 (32) per cent good and 35(32) per cent excellent, with 3(0) per cent excessive.
- Recent rains and heat have benefited hay and pasture conditions in the Peace Region. Currently, pasture is rated as (tame hay conditions in bracket) 10(11) per cent poor, 34(34) per cent fair, 46(45) per cent good, and 10(10) per cent excellent.

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Dan Tsubouchi © @Energy_Tidbits · Mar 9, 2022

#JCPOA. Good reminder from @gulf_intel podcast. Matt Stanley
@starfuels reminds Iran light matches API and H2S very well and is a
good substitute RUS Urals. See below @SPGlobalPlatts crude specs
map. #OOTT

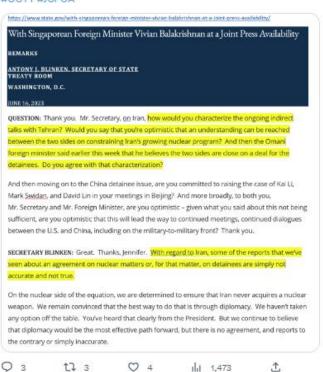
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sar — Dan Tsubouchi ❖ @Energy_Tidbits · 4h Non-denial denial!

@SecBlinken asked re status of "understanding" with Iran to hold back nuclear program.

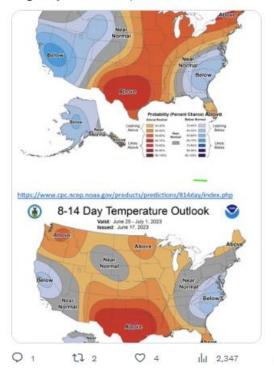
"SOME of the reports that we've seen about an agreement on nuclear matters or, for that matter, on detainees are simply not accurate and not true.

#OOTT #JCPOA



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Today's @NOAA 6-10 & 8-14 day temperature outlook covering June 23-July 1 calls for heat wave in Gulf Coast, above normal thru center slice of US, but normal/below normal parts of East & West coast. South. Not likely a big catalyst for #NatGas prices. #OOTT



SAF — Dan Tsubouchi @ @Energy_Tidbits · 23h

#Vortexa crude **#Oil** floating storage at June 16 est 104.12 mmb, +0.70 mmb WoW vs revised up big by +8.28 mmb June 9 of 103.42 mmb. Note "Other" is increasing as share of total world, is this Russia oil floating around looking for a home?

Thx @Vortexa @business.

#OOTT



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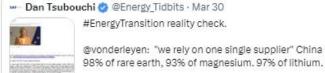
Reality check!

Good framing of why "renewable energy" is not essentially renewable" by Rosneft CEO Sechin.

"global economy does not have the metals, rare earth minerals, energy, time and money to make this transition"

"authors of the "green transition" need to coordinate the...Show more





Q 1 tl 3 Ø 11 ili 3,875 1 Dan Tsubouchi @ @Energy_Tidbits · Jun 16

RUS refineries out of maintenance = less #Oil for exports.

"Russia's refinery runs are increasing as the

nation's biggest facilities complete seasonal maintenance, Energy Minister Nikolai Shulginov said in an interview with state-run Rossiya 24" reports @ja_herron

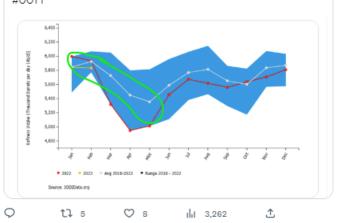
See 9 05/27... Show more

w- Dan Tsubouchi 🔮 @Energy Tidbits · May 27

Should see RUS #oil production cuts hit Jun/Jul/Aug physical markets & why cuts hasn't hit exports yet.

Normal seasonal pattern of RUS refinery turnarounds reduce oil intake by ~500,000 b/d from Feb thru May.

Thx @JODI_Data #OOTT



Dan Tsubouchi @ @Energy_Tidbits · Jun 16 #OPEC+ voluntary cuts.

> Russia expects #Oil production will be down ~400,000 b/d YoY in 2023 says Russian Energy Minister Nikolai Shulginov.

...

#OOTT

ps://tass.ru/ekonomika/18032757 lue: 0227, lue: 0127

Shulginov said that gas production in Russia in 2023 is 8-10% lower than forecast

Oil production in Russia will decrease in 2023 by 20 million tons from the level of 2022 ST. PETERSBURG, June 16. /TASS/. Gas production by Russia is now 8-10% lower than the forecast, Russian Energy Minister Nikolai Shulginov said in an interview with Izvestia during the St. Petersburg International Economic Forum.

We are guided by the forecasts that are provided for by the forecast of socio-economic development. Today we see a picture that production is 8-10% lower than those forecasts," he said.

At the same time, it is too early to name figures for gas exports, Shulginov noted.

At the same time, Russia will increase LNG production in 2023 to 32 million tons from 30 million tons a year earlier, the Russian Energy Minister said.

For liquefied gas, we are roughly guided by the figures that are included in the forecast [of socio-economic development]. An increase of 1-2 million tons, somewhere up to \$2 million tons of LNG compared to \$0 million last

Earlier, the Ministry of Energy reported that Russia in 2022 reduced gas exports by 30.7% to 170.6 billion cubic meters. Gas production in the Russian Federation last year decreased by 11.7% to 673.8 billion cubic meters. At the same time, the Ministry of Energy of the Russian Federation expects a further decrease in gas production in Russia in 2023 due to the rejection of Russian gas by European consumers and the inability to instantly reorient gas flows.

Oil production same time, according to the head of the Ministry of Energy, oil production in Russia will decrease in 2023 by 20 million tons from the level of 2022.
"The decline in oil production with condensate will probably be about 20 million tons from last year," be said.

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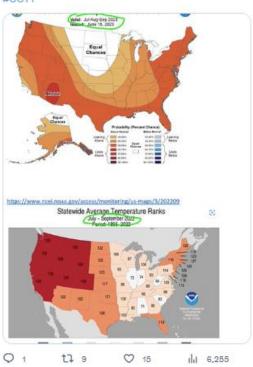
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@NOAA's updated Jul/Aug/Sep temperature outlook calls for a hot summer.

A hot 2023 summer but YoY comp is to JAS 2022 being the hottest on record over 128 years.

#OOTT



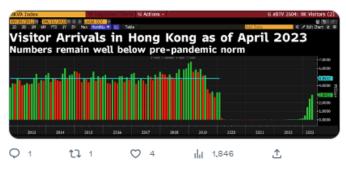
Dan Tsubouchi 🐶 @Energy_Tidbits · Jun 15

Visitor arrivals in Hong Kong still increasing but at slower growth rate. Still well below preCovid norm.

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Fits narrative of slowing China recovery, but also reminds there is big torque to recovery if China can successfully stimulate economy.

Thx @DavidInglesTV. #OOTT



Reality check!

"We recognize that at the end of any energy transition, oil will remain part of the energy mix. Right now, it's about 1/3 of the energy mix. In the future, it may go down to 1/4 but the pie will be larger" KPC CEO.

Like it or not, oil will be needed. #OOTT



SAF Group created transcript of comments by Sheikh Nawaf Saud Nasir Al-Sabah (Deputy Chairman and CEO of Kuwait Petroleum Corporation) with Axel Threlfall (Editor-at-Large, Reuters) on Al-Attiyah Foundation webcast on June 15, 2023. https://www.youtube.com/watch?v=ycf9CjiMYAI

Items in "Italics" are SAF Group created transcript.

At 11:45 min mark, Al-Sabah "... We recognize that at the end of any energy transition, all will remain part of the energy-mix. Right now, it's about a third of the energy mix. In the future, it may go down to a quarter but the pie will be larger. A quarter of a larger pie of more energy demand; that will still be a robust demand for crude oil."

Prepared by SAF Group https://safgroup.ca/news-insights/





Should be fun at #COP28

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"I say that a call on elimination of hydrocarbons within an artificial timeline will essentially lead to extreme economic dislocation and human suffering because ...

11 5,249

Dan Tsubouchi @ @Energy_Tidbits - Jun 15

Kuwait Petroleum CEO wouldn't give a number but sees China #Oil demand continuing to grow in H2/23. @axelthrelfall asks "the response is enough to keep markets stable?". CEO Al-Sabah "Yes".

See SAF Group transcript.

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#OOTT

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SAF Group created transcript of comments by Sheikh Nawaf Saud Nasir Al-Sabah (Deputy Chairman and CEO of Kuwait Petroleum Corporation) with Axel Threlfall (Editor-at-Large, Reuters) on Al-Attiyah Foundation webcast on June 15, 2023. https://www.youtube.com/watch?v=ycf9CiiMYAI

Items in "italics" are SAF Group created transcript.

At 3:35 min mark in response to question on H2/23 demand and is he optimistic China demand will continue to increase. Al-Sabah "I have been asked this over the last six months and my answer has always been consistent, I see demand in China continuing to rise, it is doing so at a sustainable rate. It is almost an assured rate as it's going through. We see that from our customers. Our customers in China is our largest customer for crude all for KPC, those customers continue to demand at least a similar amounts of crude, if not more. And it's a harbinger if you will of continued good demand, but also perhaps just of the long term supply relationship that we have with our customers. On the second half of the year assuming Chinese demand continues to grow and the opening continues to happen, we see that there will be good demand coming out of China. Numbers, nabody really knows exactly, can project exactly what those numbers will be but, we're looking forward to that." Threlfall "okay, the response is enough to keep the market stable?" Al-Sabah "Yes".

Prepared by SAF Group https://safgroup.ca/news-insights/



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Should be fun at #COP28

"I say that a call on elimination of hydrocarbons within an artificial timeline will essentially lead to extreme economic dislocation and human suffering because you need hydrocarbons over the next few decades" KPC CEO Al-Sabah to @axelthrelfall.

#OOTT



SAF Group created transcript of comments by Sheikh Nawar Saud Nasir Al-Sabah (Deputy Chairman and CEO of Kuwait Petroleum Corporation) with Axel Threlfall (Editor-at-Large, Reuters) on Al-<u>Attivah</u> Foundation webcast on June 15, 2023. https://www.youtube.com/watch?vsxf9Ciib/YAI

Items in "italics" are SAF Group created transcript.

At 18:00 min mark, Al-Sabáh ".... what we would like to see coming out of Dubai [COP28] is an open honest diadegive that includes all the portles that need to be heard on this. And from this perspective, I say that a call on elimination of hydrocarbons within an artificial timeline will essentially lead to extreme economic dislocation and human suffering because you need hydrocarbons over the next few decades. But how can we work responsibly with partners around the world to find the technical solutions and then also the funding to implement the offsets and the hydrocarbon, the corbon reduction that we are all looking forward to. That requires all of us to be warking together to a comman goal as appased to herm mitterapial."

Prepared by SAF Group https://safaroup.ca/news-insights/



Baidu city-level road congestion

Top 15 cities down YoY. Indexed to same month in 2021. June 2023 is 104, down YoY vs Covid restrictions June 2022 at 108.

9 of top 15 cities are down YoY.

See 9 @BloombergNEF

#OOTT



Our 3.5 lb maltese Chai can't wait to jump into her airplane purse as soon as she sees a suitcase by the front door.

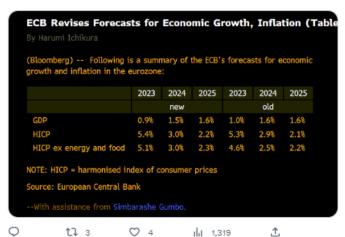
She is now 10 1/2 yrs, flown every month so knows the drill - suitcases, throw her dog purse on the floor and jump in so she doesn't miss the flight...



But can't help note ECB assumptiion on #Oil #LNG #NatGas impact on inflation.

ECB inflation forecast for 2024. 3.0% both including and excluding energy and food

Thx @business Harumi Ichikura #OOTT



Dan Tsubouchi @ @Energy_Tidbits - Jun 15

ICYMI. Across the board less than expected China economic data last night.

See ¶@onlyyoontv recap.

China cut short term rates by 10bps last night, but still surprised #Oil is up this morning.

Will keep stalled/slower than expected China recovery as key oil watch.

#OOTT



The #WarrenBuffett effect still at work in Japan.

vi.

Buffett 04/12 Japan interview with @BeckyQuick

Nikkei +19.3% since then.

Massive foreigners flows into Japanese equities since then.

Thx @business. #OOTT



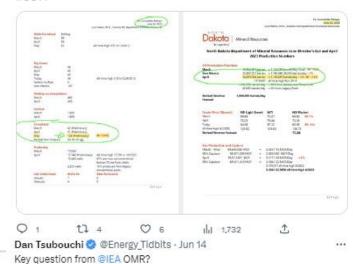
Dan Tsubouchi @ @Energy_Tidbits · Jun 14

North Dakota #Oil production should show good growth in May & June.

Note the huge estimate of 138 wells completed in May.

Post Covid, only 1 mth hit 100, 1 was >90, most months were more in the 40 to 70 range.

#OOTT



What led to the -2 mmbd QoQ drop in @IEA fcst demand from Q4/23 to Q3/24? Probably 2x normal pre-Covid QoQ drop.

If Q1/24 is low, then it subsequent quarters likely low.

Also calling peak #Oil demand in OECD.

#OOTT



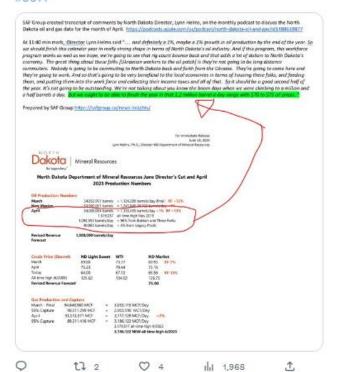
Dan Tsubouchi @ @Energy_Tidbits - Jun 13

Bit of a surprise? North Dakota sees growing #Oil production in H2/23.

See SAF Group transcript.

"But we ought to be able to finish the year in that 1.2 million barrel a day range with \$70 to \$75 oil prices" says NDIC Director Helms.

#OOTT



Dan Tsubouchi 🤣 @Energy_Tidbits · Jun 13

#EnergyTransition

Habeck warning on winter 24/25 is also likely a set up for why Germany will need to keep using #Coal (See Reuters 09/28/22) "temporarily" for longer or at least for winter 23/24 even if Putin does't do a #NatGas squeeze play.

#OOTT

reuters.com/business/energ....

Surely Putin can find a lame contract issue to stop #NatGas via UKR for winter 23/24.

EU was saved 22/23 winter with 2nd warmest DJF & 10th warmest Mar on record. it was leave the windows open & not crank up the furnace.

#OOTT #NatGas... Show more

 SAF — Dan Tsubouchi @ @Energy_Tidbits · Jun 13 China's stalling recovery.

Scheduled domestic flights -1.2% WoW to 93,328, back to mid-Apr levels.

...

Scheduled "over" next 4-wk is increasing to 103,217 flights is -13,4% vs 119,180 flights that were scheduled on Mar 28 for Apr.

Thx @BloombergNEF Claudio Lubis #OOTT



Dan Tsubouchi @ @Energy_Tidbits · Jun 12

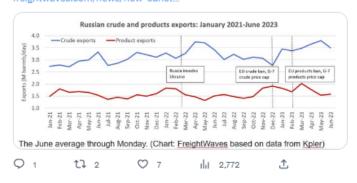
SAF

Big negative to prices in 2022/23: Biden has been able to keep Russia #Oil #PetroleumProducts supply on the market but hurt their netbacks.

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Thx @GMJournalist for graphing @Kpler showing RUS oil & products exports in line with pre-Invasion.

#OOTT freightwaves.com/news/how-sanct...



Surely Putin can find a lame contract issue to stop #NatGas via UKR for winter 23/24.

...

EU was saved 22/23 winter with 2nd warmest DJF & 10th warmest Mar on record. it was leave the windows open & not crank up the furnace.

#OOTT #NatGas... Show more

This is Iran's reminder that the deal is JCPOA & not anything else when they say "We confirm no such thing as negotiations for an interim agreement or new arrangements to replace the nuclear deal"

Must figure #Biden will keep turning a blind eye to their increasing exports in... Show more

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Course: Oakdale Golf & Country Club Watch on: GOLF, CBS Purse: \$9,000,000 Leaderboard Live Pos Player Thru Total 1 N. Taylor -15 -4 11 12 T2 + A. Rai -14 -3 T2 E. Cole -14 T2 + T. Fleetwood 8 -14 5 M. Hubbard -13 T6 + J. Rose 9 -12 T6 + T. Hatton -4 14 -12 T6 @ C.T. Pan +2 8 -12 B. Wu 12 -11 Q 1 tl O 4 1,464

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